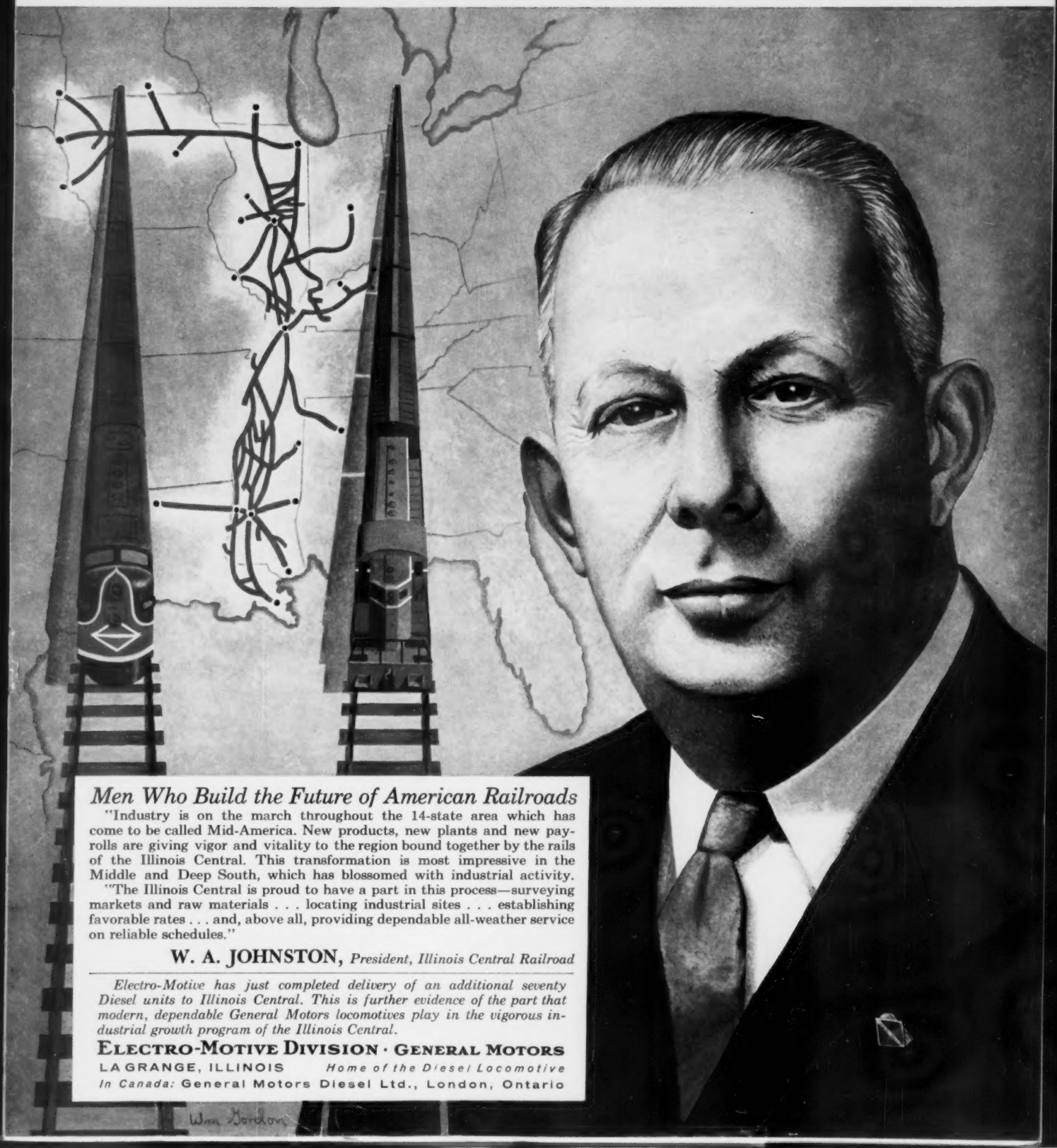
Silent Rail
Why and How RRs Use It—P. 8

Why Automatic Car Reporting? . . . p. 24

# RAILWAY AGE

FEB. 18, 1957 • THE INDUSTRY'S NEWSWEEKLY



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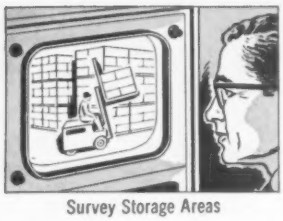
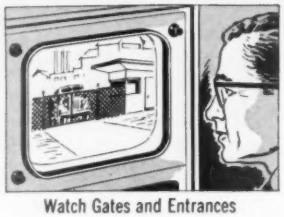
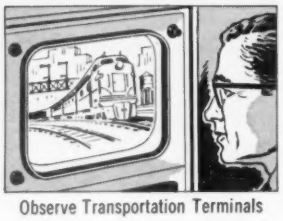


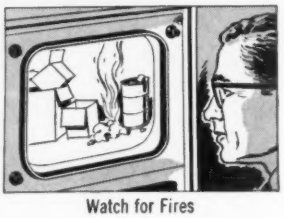
Survey Storage Areas



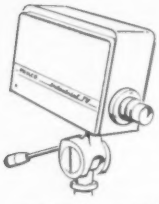
Watch Gates and Entrances



Observe Transportation Terminals



Watch for Fires



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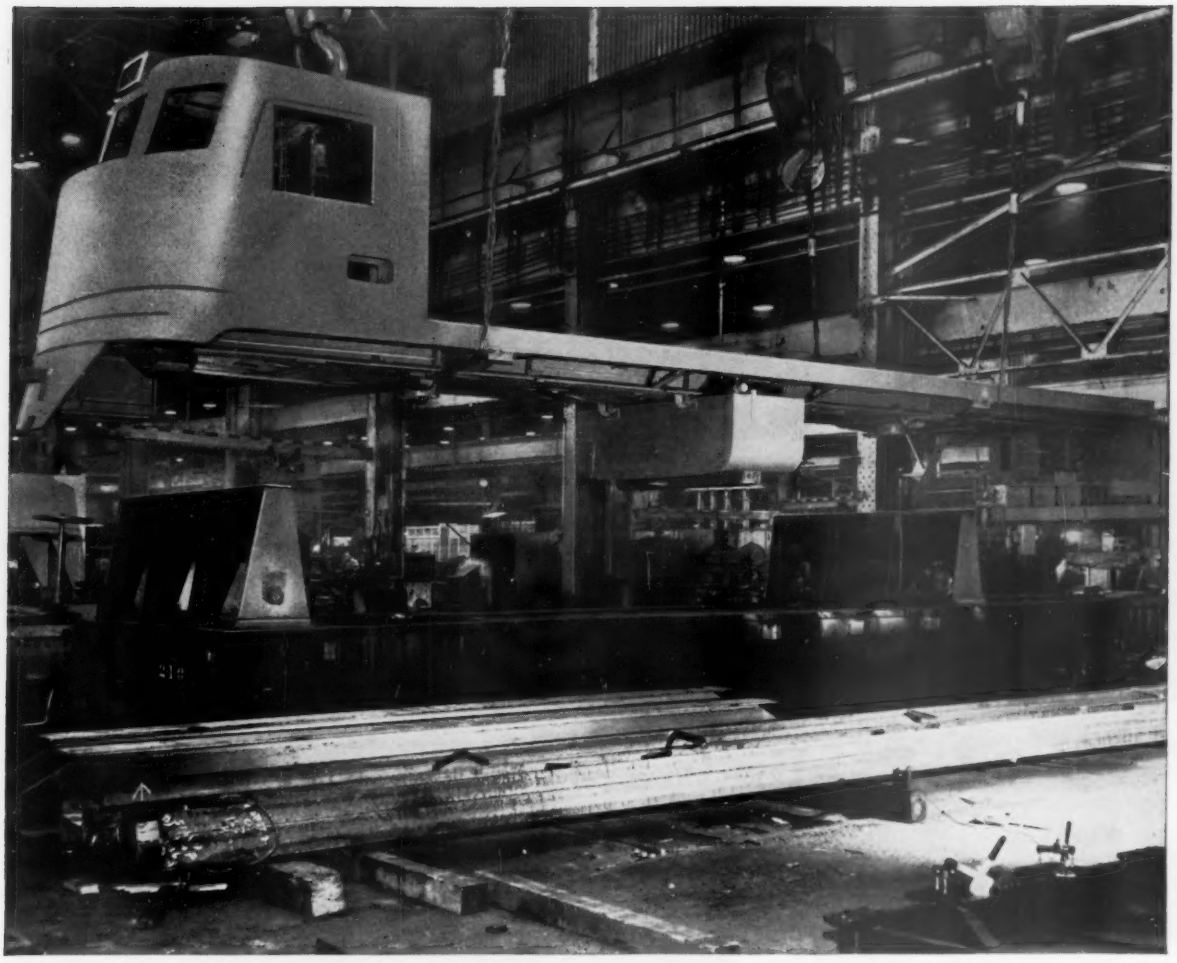

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Our Catalog 353 contains technical details on Mayari R, plus scores of illustrated application stories. Designers and owners alike will find much of interest in this booklet, available through the nearest Bethlehem district office.

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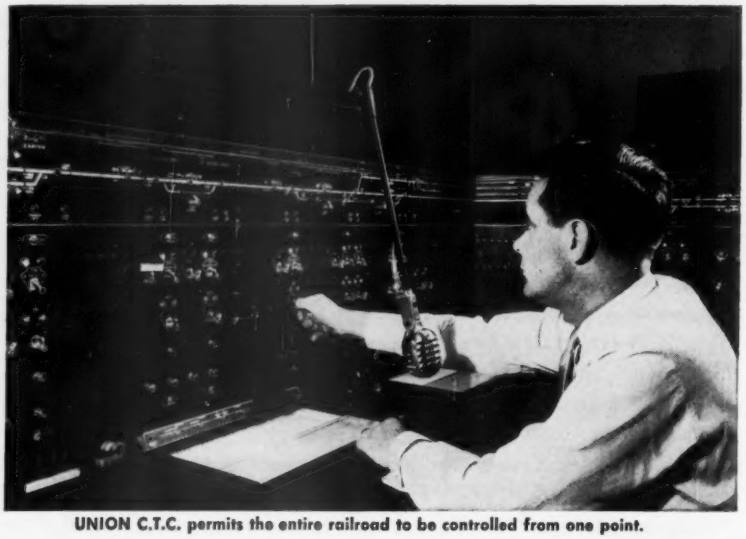

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RAILWAY AGE The Industry's Newsweekly

Vol. 142, No. 7
February 18, 1957

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PAID CIRCULATION THIS ISSUE .....14,554

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# Week at a Glance

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Here's a roundup of its uses after 25 years of slow, but accelerating acceptance.

**Slow order sought by shippers on rate hike** ..... **p.9**

"Procedural mess" is anticipated if present plan for handling Ex Parte 206 is followed, NIT League says.

**Why automatic car reporting?** ..... **p.24**

The Rock Island does it to save time and money. For example, when a traffic man comes to work in Lincoln, Neb., in the morning, he has a complete report on all car movements during the past 24 hours on RI lines which have to do with cars originating in or destined to Nebraska.

**How radio eases a trackman's woes** ..... **p.26**

More on-track time is one of many advantages accruing from use of radio communication by maintenance-of-way and bridge and building forces.

**'Specialized' cars to suit more shippers** ..... **p.29**

One solution to the growing demand for a universal car to handle mechanized and palletized loading, as well as bulk shipments, without additional expense, is a general purpose, 50-ft boxcar with two wide, staggered openings.

**Locomotives are 'deteriorating'** ..... **p.31**

Such is the conclusion of the 1956 report of the ICC's director of locomotive inspection, which points out increases in, among other things, the number of locomotives found defective and the number ordered out of service. The situation, it says, reflects the increasing age of railroad diesel power.

**Why RRs approve the central bearing** ..... **p.32**

This relatively simple device "greatly reduces or completely eliminates" shimmy or truck hunting, eliminates side bearing noise, gives longer wheel life and reduces maintenance costs.

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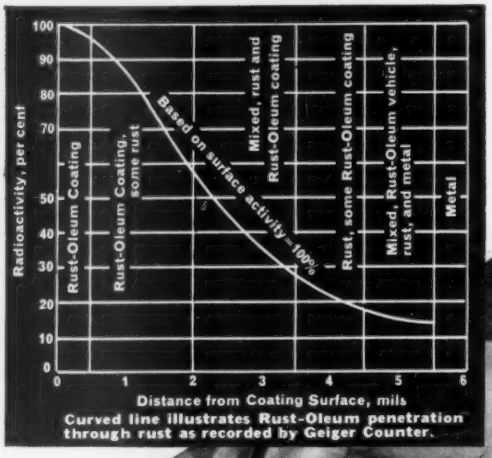

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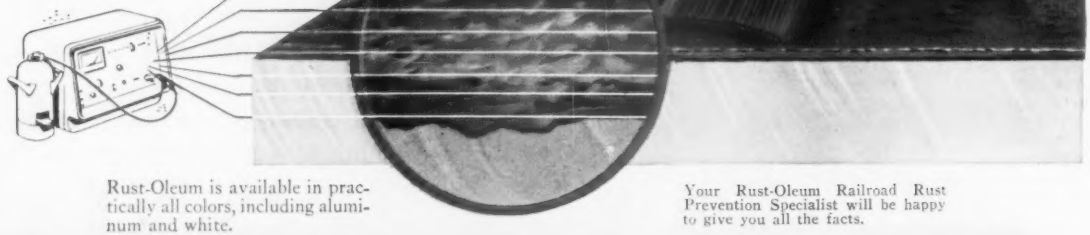

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## Current Statistics

| | |
|---|---|
| Operating revenues, eleven months | |
| 1956 | $9,679,887,374 |
| 1955 | 9,248,579,953 |
| Operating expenses, eleven months | |
| 1956 | $7,418,974,366 |
| 1955 | 6,946,596,492 |
| Taxes eleven months | |
| 1956 | $1,047,051,241 |
| 1955 | 1,018,671,666 |
| Net railway operating income, eleven months | |
| 1956 | $982,530,448 |
| 1955 | 1,050,339,559 |
| Net income, estimated, eleven months | |
| 1956 | $777,000,000 |
| 1955 | 828,000,000 |
| Average price 20 railroad stocks | |
| February 12, 1957 | 87.48 |
| February 14, 1956 | 95.12 |
| Carloadings revenue freight | |
| Five weeks, 1957 | 3,213,271 |
| Five weeks, 1956 | 3,393,762 |
| Average daily freight car surplus | |
| Wk. ended Feb. 9, 1957 | 8,726 |
| Wk. ended Feb. 11, 1956 | 5,194 |
| Average daily freight car shortage | |
| Wk. ended Feb. 9, 1957 | 2,241 |
| Wk. ended Feb. 11, 1956 | 3,009 |
| Freight cars on order | |
| January 1, 1957 | 117,257 |
| January 1, 1956 | 147,320 |
| Freight cars delivered | |
| Twelve months, 1956 | 67,080 |
| Twelve months, 1955 | 36,896 |
| Average number railroad employees | |
| Mid-December 1956 | 1,017,834 |
| Mid-December 1955 | 1,070,846 |

●

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## Week at a Glance CONTINUED

**Why the C&O feels good about the future ..... p.36**

The road's management is convinced the years ahead will bring a rise in railway traffic and earnings. Reasons for such optimism were detailed at a recent two-day meeting of officers and supervisors of the finance and accounting department.

### SHORT AND SIGNIFICANT

**Faster testing . . .**

of journal roller bearing greases could result from a letter ballot currently before AAR member roads. With a deadline of February 28, the issue is whether to permit an eight-week simulated road test in the AAR laboratory to replace longer-term road tests. Speedup would permit faster certification of new greases.

**Dates for . . .**

mandatory use of journal lubricators and a ban on cast iron wheels for new and rebuilt interchange freight cars—due to become effective next August 1 and January 1, respectively—may be postponed soon.

**Western railroads . . .**

are now in the mail-pay case along with eastern and southern lines. Asserting that mail-handling costs have increased substantially since their mail pay was last advanced in March 1954, their petition asks the ICC to investigate the situation with a view to raising the rates to a "reasonable" level.

**Simplified interchange billing . . .**

may result from AAR committee study of current interchange rules. Present long lists of coupler, draft gear and box lid prices would be reduced to only a few standard items. Simplification could cut the 400 pages of today's rules book to around 250 pages.

**"A breakdown in rail transportation . . .**

would be disastrous to all of us. In fact, in recent months the shortage of freight cars has impeded our production processes," says B. E. Estes, Jr., director, Commercial Research Division, U. S. Steel Corporation. He anticipates the railroads' heavy demand for steel plates "will continue for some time into the future."

RAILWAY AGE
The Industry's Newsweekly

# What's Ahead for Welded Rail?

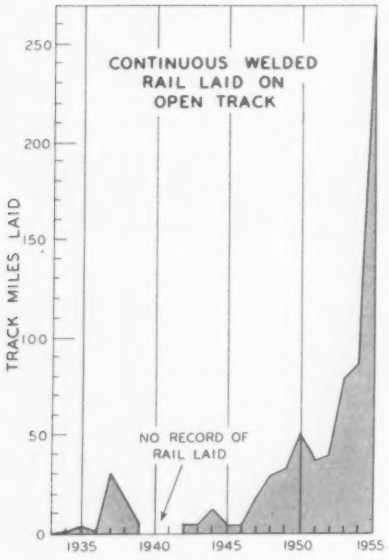
**After a quarter century of experimentation and slow growth it is now being installed at an accelerated rate—Some roads have adopted it as standard, but others still have reservations**

Where's the clickety-clack? That familiar noise made by wheels passing over rail joints has vanished from hundreds of miles of track.

Passengers notice its absence, and are appreciative. Track men are appreciative, too, but for a different reason. They're abolishing the clickety-clack by welding the rails into continuous lengths. But what's more important to them than elimination of noise is the prospect of slashing maintenance costs.

**Right now** there are strong indications that continuous welded rail is making important progress along the road toward general acceptance. It hasn't exactly been an overnight development. Railroads have been experimenting with continuous rail for a quarter of a century. Beginning in 1947, the amount installed annually (see chart), began to show steady increases, but most installations were regarded as experimental.

Then, in 1955, the installation curve seemed to break out of the previous pattern of moderate yearly increases. But the chart tells only part of the story. The curve went up sharply in 1955, not so much because railroads generally were embracing this form of construction, but because a few railroads—the Santa Fe, for example—were going in for long rail in a really big way. Of the 266 track-miles installed in 1955, a total of 103 miles was laid on that road alone.




What brings continuous rail into the news today is that a handful of roads have made it standard construction for all new rail laid. The Santa Fe is one; the Soo Line, the TP&W and the EJ&E are three others. Last year the Santa Fe laid some 250 miles of track with continuous rail, nearly as much as was laid by all roads in 1955. And in 1957, the big western carrier will lay 285 track-miles, which will represent its entire new rail program.

The fact that continuous rail makes for smoother, quieter riding track is a relatively minor consideration in the eyes of the track engineer. He likes the idea simply because it does away with a component of the track—the conventional joint—that absorbs upwards of 50% of track-maintenance costs.

But before he could accept continuous rail for general use, he had to be sure—and this is the main reason for the long experimentation—that it could be used safely. No longer would he have a gap every 39 ft or so to allow for expansion on hot summer days.

**Important questions** arose. Wouldn't the long lengths of rail develop internal stresses that would cause the track to buckle or kick out of line? Would it be possible to produce butt-welds of the required strength? How about the problems involved in handling and laying long lengths of welded rail? How would the situation be handled if a rail were to break in service? What problems would be presented by rail wearing out faster on curves than on tangent track, and what would be done about them?

These were formidable questions, but track men had to face them because they were playing for high stakes—the substantial savings that could be realized if satisfactory answers were found.

As time went by, evidence piled up that many of the problems connected with use of welded rail were not as serious as anticipated. Insofar as expansion was concerned, early installations proved that a long length acted similarly to the shorter 33-ft or 39-ft lengths. Such movement as occurred was found to take place in the ends of each long length, with the center portion being restrained by the anchors. The problem of movement, therefore, was solved by adding more rail anchors to the six rail lengths making up each end of a long string.

**There was some breakage** of welds in early installations, but this problem was overcome by improved welding techniques. Now, welds are stronger than the parent rail being joined.

The problems of handling and transporting long rails were easily overcome, especially after it was learned the long rails could be hauled on flat cars around even relatively sharp curves without difficulty.

There is still some difference of opinion about use of continuous rails on curves. One chief engineer explains he has not used such rails on curves because of the short life due to gage-corner shelling of the high rail and mashing of the low rail. Others hold it is preferable to restrict use of welded rail to tangent track or light curves.

The Northern Pacific, says H. R. Peterson, chief engineer, has laid 115-lb welded rail on curves under 2 deg, but adds that curves over 2 deg have been laid with 140-lb rail as a test.

On the other hand, the TP&W, says R. H. Egbert, chief engineer, has "laid continuous welded rail on 4-deg 15-min curves and experienced no difficulty either in laying or in maintenance." He feels that 5-deg curves are the maximum for such rails. L. V. Johnson, chief engineer of the Soo Line, says he has laid long rails on 4-deg curves and expects to lay them on any curves.

Even though track men can keep the expansion of long rails under control by sufficient and proper anchorage, they worry about what might happen when such rail is surfaced during hot weather. They're afraid locked-up stresses in the rail may get out of hand when track is lifted out of its bed in the ballast, or when the restraining forces are otherwise reduced.

One example of what can happen was cited by Mr. Peterson: "When raising off the end of a bridge, a 4-in. raise was made that emptied the cribs. The track went up 12 in. and out 21 in., making it necessary to cut both rails to restore line and surface." He explains, however, that his road is making a 2-in. power tamping raise on all welded rail installations "without trouble as long as the cribs are kept full."

Many track men feel there is risk involved in surfacing track at temperatures above that which prevailed when the rail was laid. But this stipulation runs smack into the need, in these days of tightly scheduled maintenance operations, of being able to work regardless of how hot it gets. Some trackmen believe welded rail can be surfaced under almost any temperature conditions if the right precautions are observed.

When a defective rail develops in conventional track, it's a simple matter to disconnect the bad rail at the joints and insert a new one. In welded rail, of course, other ways must be found to handle this problem. The way the Richmond, Fredericksburg & Potomac does it is representative. J.C. DeJarnette, Jr., chief engineer of the RF&P, explains his practice this way: "We cut the welded rail, allow it to adjust itself, and then cut in a standard 39-ft rail, applying to joint bars at both ends."

Some roads, however, don't want to add joints to welded rail. The chief engineer of one road with this viewpoint says: "We apply end anchorage on each side of the rail to be removed, take out the defective rail, weld in a new one and reapply conventional anchorage."

When railroad men are talking about "continuous" welded rail they are thinking in terms of strings consisting of anywhere from 20 to 40 standard lengths. Some roads, however, prefer to use double or triple welded lengths, joining them when laid with conventional joints. That way they get some of the advantages of welded track, without all the problems that go with it. As one chief engineer expressed it:

"We have adopted 78-ft rails for practically all new rail, after giving due consideration to the transportation problems from the welding setup, ease of changeout in case of a derailment or rail failure, and the fact that the 78-ft rails will permit surfacing of the track under any temperature conditions. In the matter of rail failures, we are particularly concerned over those due to shelling, which have become a problem with control-cooled rail in our heavy-traffic territory."

There's a growing school of track men who want the advantages of continuous rail without the disad-

*(Continued on page 15)*

# NIT League Would Slow Down Ex Parte 206

**Advises ICC of shipper view that, under present program, 'all hope for sound treatment of the case will become buried under a procedural mess'**

The National Industrial Traffic League has asked the Interstate Commerce Commission to spread out remaining proceedings in the Ex Parte 206 case.

Proceedings involved are those set up for consideration of the plea of eastern and western railroads for authority to bring their freight rate increases up to 22%, including the interim increase which became effective December 28, 1956 (Railway Age, Jan. 28, p. 10). No proceedings have yet been scheduled on the petition of southern roads for an overall advance of 15%, including their interim increase of 5% (Railway Age, Feb. 11, p. 14).

There is a "definite consensus" among protestants that, under the present program, the eastern-western case "will become buried under a procedural mess," the league said. The program's first date was February 1, when verified statements of the carriers were submitted, and its last date is May 1, when oral argument is scheduled to get under way.

The league argued that this does not allow time for "fair and full hearing and mature decision." It complained that the opposition is required to produce its evidence before completion of, or cross-examination on, the verified statements of petitioners. It also complained that the verified-statement plan affords no way of offering evidence of a witness who may not be cooperative.

The railroads' undertaking to improve their rates of return makes the case "unique," the league says. It thus urges the commission not to adhere to a procedure which will submerge "vital and novel" questions in a "confused mass of detailed showing on various categories of traffic."

The improved-return approach was referred to as "a large new order calling for a decision as to what revenues are needed to fulfill the common carrier obligation and perform the purposes of the National Transportation Policy."

Some, "but not all," of the "underlying questions" were set out by the league as follows:

1. What rate of return is necessary to maintain credit and attract capital and meet the law's requirements? What are the circumstances and conditions affecting comparison of railroad rates of return with those of other industries?

2. What rate of return shall be permitted to strong roads to maintain a rate level sufficient to produce an "adequate" rate of return for weak railroads?

3. What additional revenues in the

## 1,000 Guests

**The Traffic Club of Philadelphia was host to about 1,000 industrial and transportation executives at its recent 45th annual dinner in the Benjamin Franklin Hotel. Principal speaker was Victor Riesel (above, center), noted labor columnist. Joseph A. DeGeorge, club president and district sales manager for the Pan Atlantic Steamship Corporation, is at the left. Dinner toastmaster was Joseph A. Fisher (right), president of the Reading.**

aggregate are necessary for adequate maintenance, sound additions and betterments and true technological advances? What are the conditions of the carriers' properties and what additions, betterments or technological advances should be provided?

4. What is the relationship between the revenues and rates of return of strong and weak roads, on the one hand, and their respective traffic and operating conditions, methods and circumstances, on the other?

5. To what extent will a general increase in rates of all railroads be effective, as well as just and reasonable, for the purpose of improving net earnings and rates of return?

# NYC Collision Sets Off 3-Way Study

An investigation set off by the collision of two New York Central trains at Ripley, N.Y., on February 8 moves into the public hearings stage this week.

An ICC hearing, slated for February 20 in Buffalo, N.Y., is one phase of a comprehensive investigation involving the commission, the NYC and the Public Service Commission of New York. The ICC case is Ex Parte No. 209.

The February 8 collision, in which the engineman of one train was killed, has stimulated extra interest in railroad circles. Ripley, site of the accident, is between Cleveland and Buffalo in territory where the Central recently placed in service a new system of centralized traffic control (Railway Age, Jan. 21, p. 44).

The day following the accident the NYC issued this statement: "Preliminary investigation indicates the accident was caused by the failure of the engineman of train No. 74 [a passenger train] to comply with the operating rules and rules for the operation of the automatic train control. Had these rules been complied with the accident could not have happened. The new electronic CTC system functioned properly and was in no way involved in the accident."

In Cleveland, Guy L. Brown, grand chief of the Brotherhood of Locomotive Engineers, fired back a criticism of the railroad. The road, Mr. Brown said, was "too quick to damn a man who is not alive to tell his story." He called for "thorough investigation" by the ICC, a step which the commission, meanwhile, was already taking.

Briefly, here are the conditions surrounding the accident:

The westbound freight train was crossing over from the north main track to the south main track. The passenger train (No. 74) was proceeding eastward on the north main track and struck the freight train, which had not completed its crossover movement, about midway between the engine and caboose. There appears to be no question of the normal functioning of the wayside signals, i.e., that the approach signal showed yellow and the home signal red over red.

In passing the approach signal at yellow, the train would have been brought to a halt by the automatic train stop unless the engineman had "forestalled." The rules require in such a case that train speed be reduced to less than 35 mph. The track is tangent and the home signal is clearly visible for some 4,500 ft. The weather was clear.

The accident derailed 28 cars of the freight train, and the two diesel units and four headend cars of the passenger train.

## Pictures Help This Shipper Load Better

**As a service to customers — and a means of checking the effectiveness of loading practices—the Newark, Ohio, plant of Kaiser Aluminum & Chemical Corp. now photographs loaded cars before they leave the mill. Pictures made before car is sealed are sent to Kaiser sales offices in the customer's area; other photos are tacked inside the car door. This gives the receiver a look at his car as it was shipped, and can provide Kaiser's shipping department with before-and-after knowledge of how a load stood up in transit.**

## Gordon Denies Inequities In Agreed Charges Plans

There is no geographical favoritism and no unfairness to the public or transport competitors in the use of "agreed charges."

So Canadian National Chairman and President Donald Gordon told the Edmonton Chamber of Commerce February 18. He said such rates have been "misrepresented" in some areas, reflecting a "misconception" of their nature. Mr. Gordon denied that if rates are lowered in one place through the "agreed charge" system they must be raised elsewhere to compensate.

"In actual fact," he said, "close examination shows that all traffic moved under agreed charges produces a profit above the cost of moving it and such profit is a contribution towards the fixed expenses of the railway.

"Without these agreed charges, the traffic that they cover would have been entirely lost to competing modes of transportation and the railway's fixed cost—undiminished by profit from the special rates—would have fallen all the more heavily on regular traffic.

"Once an agreed charge is made on a commodity, all shippers who are prepared to abide by the terms of the contract are free to take advantage of the special rates."

Mr. Gordon, discussing modern transport needs, commented that many CNR western lines were not built for, and will not stand up under, present-day axle loads at high speeds. To rectify this condition, he went on, CNR has spent $5 million to launch a program of track maintenance and improvement which will cost $50 million through 1960.

In another address to the Vancouver Board of Trade, Mr. Gordon discussed the role a railroad plays in the industrial development of a given area. He pointed out that this has stimulated, in part, extension of the CNR's lines. Since 1946, he said, 580 miles of new branch lines have been built or are being built.

## SP Now Sells Tickets For Second Airline

Southern Pacific began handling tickets for a second airline on February 12. Through a recent agreement, SP ticket agents are now selling fares for American Airlines in more than 200 western towns.

The new service began in selected California, Nevada, New Mexico, Oregon and Texas municipalities where AAL formerly did not have representation. Ticket agents work through SP control centers in Portland, San Francisco, Los Angeles, Phoenix, El Paso, San Antonio and Houston to confirm reservations with the airline.

The railroad has been booking passengers for United Air Lines since October 1956 in California, Oregon and Nevada (Railway Age, Sept. 24, 1956, p. 11).

## Rill Sees Contract Carriage As Threat to Reefers

"The future of the mechanical refrigerator car is definitely in the hands of the shipping public," John C. Rill, president of the Fruit Growers, Western Fruit and Burlington express companies, believes.

He told the recent United Fresh Fruit and Vegetable Association convention at Philadelphia that equipment improvement programs undertaken by his and other companies cannot be fully justified by "the statistics" in relation to other transport forms.

"Continuing diversion of traffic from these cars," he declared, "does not provide a sound basis for continuing investments in improvements to existing fleets of cars or development of new types of cars."

"A continuing shift of perishable traffic away from railroads," he said, has been accompanied by a "significant increase in use of private carriage—to the detriment of the common carrier, whether it be railroad, water or highway."

He acknowledged a place for each type of transport, but urged perishable foods producers to encourage legislation which would permit railroads greater freedom to compete. He also called for an end to transportation excise taxes.

# Clerks' President Assails Automation

Automation, competition, the government and the public are the four main sources of trouble for railroads, says George M. Harrison, president, Brotherhood of Railway Clerks.

Noting the concern of railway labor with the effect of manpower-reducing equipment, Mr. Harrison wrote in the AFL-CIO American Federationist that "automation is advancing in railroad offices, shops and every other branch of our industry. Automation is taking over workers' jobs."

He said the BRC has been able to "minimize" such effects on its members through job protection agreements, but that all employee organizations are being affected by developments in "pushbutton" railroading and other technological advances.

Nevertheless, Mr. Harrison paid tributes to the operational and other improvements afforded through the new tools now available to industry.

The BRC chief outlined the picture of railroads competing with the private automobile and with subsidized transportation for the travel and freight dollar. "It is difficult to discuss competition without getting into the field of government regulation, intervention and favoritism."

So burdensome are today's regulatory restrictions, Mr. Harrison stated, that "our industry just cannot make the adjustment required to protect our service." The railroads, he said, "need a larger measure of freedom" and the nation will gain if they get it.

The railroads' problem with the public, Mr. Harrison went on, lies in their own "failure . . . to keep pace with public taste and to capitalize on the good will which they and their employees built up during the war."

*(Continued on page 14)*

## 'Most Civic-Minded' RR Employee Is Honored

**Leo W. Benjamin (second from left), New York Central agent at Eaton Rapids, Mich., has been named "Michigan's most civic-minded railroad employee" by the Michigan Railroads Association. George H. Wyatt (left), chairman of the association, is shown presenting Mr. Benjamin with an engraved silver tray and a U.S. savings bond at a recent testimonial dinner. Looking on are Mrs. Benjamin and E.C. Johnson, general manager, Northern District, NYC. The honor was bestowed upon Mr. Benjamin after a canvass of Michigan's 40,000 railroad employees.**

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# MARKET OUTLOOK THIS WEEK

## Loadings Rise 2.7% in Week

**Loadings of revenue freight in the week ended February 9 totaled 665,251 cars, the Association of American Railroads announced on February 14. This was an increase of 17,279 cars, or 2.7%, compared with the previous week; a decrease of 19,077 cars, or 2.8%, compared with the corresponding week last year; and an increase of 26,463 cars, or 4.1%, compared with the equivalent 1955 week.**

**Loadings of revenue freight for the week ended February 2 totaled 647,972 cars; the summary, compiled by the Car Service Division, AAR, follows:**

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, February 2

| District | 1957 | 1956 | 1955 |
|---|---|---|---|
| Eastern | 117,847 | 120,073 | 107,941 |
| Alleghany | 135,203 | 139,071 | 114,557 |
| Pocahontas | 48,886 | 58,694 | 49,861 |
| Southern | 115,590 | 129,557 | 126,605 |
| Northwestern | 71,160 | 71,263 | 72,423 |
| Central Western | 108,777 | 109,751 | 109,230 |
| Southwestern | 50,509 | 52,580 | 55,162 |
| Total Western Districts | 230,446 | 233,594 | 236,815 |
| Total All Roads | 647,972 | 680,989 | 635,779 |
| Commodities: | | | |
| Grain and grain products | 51,723 | 44,286 | 44,629 |
| Livestock | 5,401 | 7,146 | 7,310 |
| Coal | 123,671 | 142,789 | 124,475 |
| Coke | 13,212 | 13,733 | 10,115 |
| Forest Products | 35,325 | 43,207 | 43,869 |
| Ore | 18,946 | 17,810 | 12,138 |
| Merchandise l.c.l. | 55,543 | 59,788 | 60,677 |
| Miscellaneous | 344,151 | 352,230 | 332,566 |
| February 2 | 647,972 | 680,989 | 635,779 |
| January 26 | 665,745 | 691,850 | 637,116 |
| January 19 | 657,269 | 699,286 | 630,351 |
| January 12 | 680,766 | 710,338 | 639,833 |
| January 5 | 561,519 | 611,299 | 597,352 |
| Cumulative total, 5 weeks | 3,213,271 | 3,393,762 | 3,140,431 |

**IN CANADA.—Carloadings for the ten-day period ended January 31 totaled 116,889 cars, compared with 73,469 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.**

| | Revenue Cars Loaded | Total Cars Rec'd from Connections |
|---|---|---|
| Totals for Canada: | | |
| January 31, 1957 | 116,889 | 49,268 |
| January 31, 1956 | 108,088 | 51,419 |
| Cumulative Totals: | | |
| January 31, 1957 | 289,999 | 127,522 |
| January 31, 1956 | 319,986 | 147,281 |

## New Equipment

### FREIGHT-TRAIN CARS

► *Baltimore & Ohio.*—Ordered 200 70-ton covered hopper cars Pullman-Standard; approximate cost $1,700,000; delivery expected fourth quarter 1957.

► *Chicago, Burlington & Quincy.*—Ordered 75 70-ton "Airslide" covered hopper cars, General American; estimated cost $975,000; delivery expected third quarter 1958.

► *Colorado & Wyoming.*—Ordered 25 70-ton gondola cars, Pullman-Standard; estimated cost $220,000; delivery expected late this year.

► *Jersey Central Lines.*—Ordered 50 70-ton gondola cars, unit cost $8,825, Bethlehem Steel, for delivery in fourth quarter 1957, and 50 50-ton box cars, unit cost $7,900, Pullman-Standard, for delivery in December 1957.

► *Kansas City Southern.*—Ordered 75 70-ton gondola cars, Bethlehem Steel; approximate unit cost $8,900; delivery scheduled for fourth quarter 1957.

► *Milwaukee.*—Ordered 100 50-ton insulated box cars, Pacific Car & Foundry, and 200 70-ton covered hopper cars and 50 70-ton flat cars, Pullman-Standard; delivery scheduled for first quarter 1958.

► *Northern Pacific.*—Ordered 25 70-ton "Airslide" covered hopper cars, General American; estimated unit cost $13,010; delivery expected third quarter 1958.

► *Orinoco Mining Co. (Venezuela).*—Ordered 525 100-ton ore cars, Magor Car.

► *Philadelphia, Bethlehem & New England.*—Ordered 30 70-ton gondola cars, Bethlehem Steel; estimated cost $275,000; delivery expected late in 1957 or early in 1958.

### PASSENGER-TRAIN CARS

► *Argentina.*—Bids for supply of 112 subway coaches to cost about $13,160,000 have been requested by a government-owned enterprise which operates most passenger transportation services in Buenos Aires, says Foreign Commerce Weekly; information is available from the enterprise, Transportes de Buenos Aires, in that city.

## New Facilities

► *Canadian Steel Foundries.*—Announced plans for construction at Montreal of Canada's first plant for production of wrought steel wheels for railroad cars and locomotives; construction of $6 million plant is to start immediately, with first production scheduled for late 1958 or early 1959; initial goal is for annual production of 100,000 wheels.

*(Continued from page 11)*

In this connection he said that the rail experiments with lightweight trains are good but "there have not been enough of them to make a real test. Operation of the lightweight trains on an experimental basis should stop. They have to get out of the shops and on to the roads—in volume. A couple of shiny showpieces cannot run on a one-day basis and be expected to save a railroad."

## Gov't Aids Traffic Shift, Says Clarke

Government itself is partly to blame for the shifting of traffic from regulated to unregulated carriers, Owen Clarke, Interstate Commerce Commission chairman, said in Chicago last week.

"Some agencies divert traffic from regulated carriers, some seek rates as low as they possibly can under Section 22 quotations, and others tacitly encourage the continual expansion of exempt commodities and carriers," he told last week's annual meeting of the Transportation Association of America in Chicago. "All of this contributes to a weakening of the services which the average shipper wants and needs."

The TAA went on record in support of the ICC's proposal to streamline procedures in rail circuity cases under Section 4 of the Interstate Commerce Act without otherwise changing the effect of the long-and-short-haul clause.

A resolution supporting repeal of federal excise taxes on transportation was introduced by Illinois Central President Wayne A. Johnston. Noting that nearly 100 organizations are supporting repeal of the 3% tax on freight bills and 10% tax on passenger tickets, it said that the TAA "will expand its own efforts by every appropriate means to attain the desired goal."

Clarence G. Morse, Federal Maritime Board chairman, told the meeting that "American shipping firms, subsidized and non-subsidized alike, must be encouraged to go ahead with their long-range plans for a new 'generation' of ships."

A warning that "too much cutthroat competition in any industry could injure the public, or too much regulation could strangle the industry," was voiced by James R. Durfee, chairman of the Civil Aeronautics Board.

## NP Policy: We're More Than a RR

"It's our philosophy we are in the transportation business. We have an interest in pipe lines; we have an interest in truck lines—and as far as the law will permit, we're going to expand those interests."

That's how Robert S. Macfarlane, president of the Northern Pacific, recently pictured for the New York Society of Security Analysts his road's connection with non-railroad transport media.

He said he expects exploratory and developmental work to continue at high levels on NP pipe line properties. Piggyback operations on the road are likewise being expanded, Mr. Macfarlane said, "not spectacularly but satisfactorily." He reported that NP trailers are reaching into southern California through interchange arrangements, just as the Southern Pacific's are now getting into the Pacific Northwest.

Merger studies involving the NP and Great Northern are progressing, he said, but the scope of proposals made must prolong the investigations.

"Mr. Budd [GN president] and I are in full agreement," Mr. Macfarlane stated. "The initiative has not come from either side—it's from both sides" and the proposals are aimed at helping both roads.

## Gurley Scolds Labor's 'Monopoly Power'

"One of the most potent forces contributing to our present economic position has been the monopoly power of the unions exerted in unrelenting pressure for wage increases."

So said Santa Fe President Fred G. Gurley at the recent annual convention of the National Association of Wheat Growers in Lincoln, Neb.

"We face today the serious problem of bringing the power of organized labor into harmony with the welfare of the people as a whole," Mr. Gurley declared. "Our economic system demands such a balancing of rights from labor just as it does from capital."

"Our principal difficulty up until now in resolving this problem," he continued, "is that opposition to compulsory unionism has not been distinguished from opposition to unions themselves. Two entirely distinct matters are involved. Unions have a well-recognized right to existence under our system, but plainly it is not a right that rises above its source."

"There can be no double standard when we are dealing with human rights," Mr. Gurley said. "In my opinion we cannot protest against and condemn the subjugation of Europeans and Asians by Communist despots and ideologies, and at the same time condone at home the suppression of what one of the Justices of the Supreme Court of the United States has called 'the most precious liberty that man possesses'—the right to work."

### INDEX TO VOLUME 141

**The index to the latest volume of Railway Age, July through December, 1956, is now ready for distribution, and copies may be had by those subscribers desiring them. Requests should be addressed to the Circulation Department, Railway Age, 30 Church street, New York 7. Subscribers who have in previous years made application for the index need not apply again. They will continue to receive it as long as they continue to subscribe.**

## New Haven's 'Lightweight' Trio Is All on Line

All three sets of the New Haven's new lightweight passenger equipment were to have been "on the property" this week.

Delivery of the Fairbanks, Morse—ACF "Talgo"-type train was reported early last week. The Budd-built "Flying Cloud" was expected to be delivered over this past weekend.

They join the "Dan'l Webster" built by Pullman-Standard and Baldwin-Lima-Hamilton. This train has been on the property for several weeks but is still being tested before going into regular service. Its debut last month was marred by a fire.

The "Talgo"-type train—still unnamed officially—was put into revenue service for one day last week but was scheduled for further tests before being assigned a regular run.

The Budd train also will be tested on line before entering regular operations, a spokesman said. All three trains are slated for Boston-New York runs.

Also undergoing tests on the New

Haven are two Electro-Motive FL-9 1,750-hp diesel locomotive units—first received of a large order—which are designed to handle standard passenger trains under their own or third-rail power.

## Southern Fined $20,000

Fines totaling $20,000 have been imposed on the Southern for violations of the Interstate Commerce Act, the Interstate Commerce Commission has announced.

The commission's notice of January 30 said advices had been received from the United States attorney at Charleston, S. C., that the road on January 24 pleaded *nolo contendere* to a 20-count information in the United States District Court there. The court imposed fines of $1,000 on each count.

The information charged violations of Section 20(7)(b) of the Interstate Commerce Act. The violations, the commission said, involved failure to make "full, true, and correct entries" in the accounts, records and memoranda kept by it in connection with the improvement of the Lincoln Green Demonstration Forest at Dorchester, S. C.

# What's Ahead for Welded Rail?

*(Continued from page 9)*

vantages. They would like to do away with the joint action while, at the same time, retaining the flexibility inherent in having track laid with 39-ft rails. Their answer to these conflicting requirements is the so-called "frozen joint." This is a bolted joint with major differences from the standard joint. In the first place, the rails are laid without a gap at the joint, and in the second place, the bolts are tightened sufficiently to "freeze" the rail in the "tight" position.

Adherents of this form of construction point out that it gives the same characteristics as continuous welded rail, while still allowing single rails to be changed out. Several railroads, including the Chesapeake & Ohio and the Louisville & Nashville, have test installations of "frozen joint" track, and more are planned.

At present, butt-welds are made by two principal processes. One is Linde Air Products' oxyacetylene pressure-welding method. The other is Matisa Equipment Corporation's flash-butt method.

However, the growing interest of railroads in continuous rail has sparked interest in other quarters. For example, Sperry Rail Service, which was in the business of butt-welding rails back in the 'Thirties, is reported at work on an engineering program to get back into the field with a suitable process.

Indications are that continuous welded rail will be laid in increasing amounts as time goes by. The attitude of those roads that look with favor on this type of construction is summed up in these words of one chief engineer:

"We have welded rail for 14 years, and, while the problems of maintenance are somewhat different from those of conventional rail, they are all just problems and can be easily handled. I believe any track that requires a surfacing cycle of from four to six years would probably economically justify putting in welded rail, assuming of course that the subgrade conditions are average. We plan to lay more welded rail when our bolted main-line rail has attained sufficient surface life."

On the other hand, there is a school of thought which holds that continuous rail has decided limitations, especially where wide temperature ranges have to be dealt with. One railroad where such conditions exist, and which has some continuous rail, reports it is unable to correct faulty line and surface in the summer when temperatures are high. It adds that some of its welded rail has now reached the tonnage "age" where it is developing shell defects. "Replacement of a defect in continuous welded rail takes several times as long as in jointed track, and, on a busy line, will usually result in substantial delays to traffic," says this company's chief engineer. He does not see important advantages or savings in the use of such rail, and feels that the operation of taking it up and moving it to branch lines or yard tracks will be considerably more complicated than handling the equivalent amount of jointed track.

# Financial

**Virginian.**—*Stock Split.*—Directors of the Virginian have approved splits of 2½-for-1 in both the common and preferred stocks. The split, subject to approval by stockholders at the April 25 meeting and by the ICC, would become effective about August 1.

## Dividends Declared

**BANGOR & AROOSTOOK.**—60c, quarterly, payable March 29 to holders of record March 8.

**BOSTON & MAINE.**—$5 preferred, $1.25, quarterly, payable April 5, June 28, September 27 and December 27 to holders of record April 2, June 25, September 24 and December 24, respectively.

**CENTRAL OF GEORGIA.**—5% preferred A, $1.25, quarterly, payable March 20 to holders of record March 8; 5% preferred B, $1.25, quarterly, payable March 20, June 20, September 20 and December 20, to holders of record March 8, June 8, September 7 and December 7, respectively.

**CLEVELAND & PITTSBURGH.**—7% guaranteed, 87½c, quarterly; 4% special guaranteed, 50c, quarterly, both payable March 1 to holders of record February 8.

**DAYTON & MICHIGAN.**— Common, 87½¢, semiannual; 8% preferred, $1, quarterly, both payable April 1 to holders of record March 15.

**DOVER & ROCKAWAY.**—$3, semiannual, payable April 1 to holders of record March 29.

**ERIE.**—$5 preferred, $1.25, quarterly, payable March 1, June 1, September 1 and December 1 to holders of record February 8, May 10, August 9 and November 8, respectively.

**ERIE & KALAMAZOO.**—$1.50, paid February 15 to holders of record January 31.

**ERIE & PITTSBURGH.**—7% preferred, 87½c, quarterly, payable March 11 to holders of record February 28.

**FORT WAYNE & JACKSON.**—5½% preferred $2.75, semiannual, payable March 4 to holders of record February 21.

**GREAT NORTHERN.**—75c, quarterly, payable March 18 to holders of record February 21.

**GREEN BAY & WESTERN.**—common, $5; income debentures A, $50; income debentures B, $15, all paid February 6 to holders of record January 18.

**GULF, MOBILE & OHIO.**—common, 50¢, quarterly, payable March 11 to holders of record February 18; $5 preferred, $1.25, quarterly, payable September 9 to holders of record August 19.

**INTERNATIONAL OF CENTRAL AMERICA.**—5% preferred, $1.25, accumulation, paid February 15 to holders of record February 5.

**LEHIGH VALLEY.**—30c, quarterly, payable February 18 to holders of record February 1.

**LOUISVILLE, HENDERSON & ST. LOUIS.**—5% non-cumulative preferred, $2.50, semiannual, paid February 15 to holders of record February 1.

**MAINE CENTRAL.**—5% preferred, $16.25, accumulation, payable March 1 to holders of record February 15.

**MINNEAPOLIS & ST. LOUIS.**—35c, quarterly, payable February 28 to holders of record February 9.

**MONON.**—Class A, $1.25, accumulation, payable April 19 to holders of record April 5.

**NASHVILLE, CHATTANOOGA & ST. LOUIS.**—$1, quarterly, payable March 1 to holders of record February 6.

**NEW YORK CENTRAL.**—50c, quarterly, payable March 11 to holders of record February 18.

**NORFOLK & WESTERN.**—90c, quarterly, payable March 9 to holders of record February 7.

**NORTHERN OF NEW HAMPSHIRE.**—$1.50, quarterly, paid January 31 to holders of record January 17.

**ONTARIO & QUEBEC.**—$3, semiannual, payable in Canadian funds June 1 to holders of record May 1.

**PENNSYLVANIA.** — 35c, quarterly, payable March 11 to holders of record February 4.

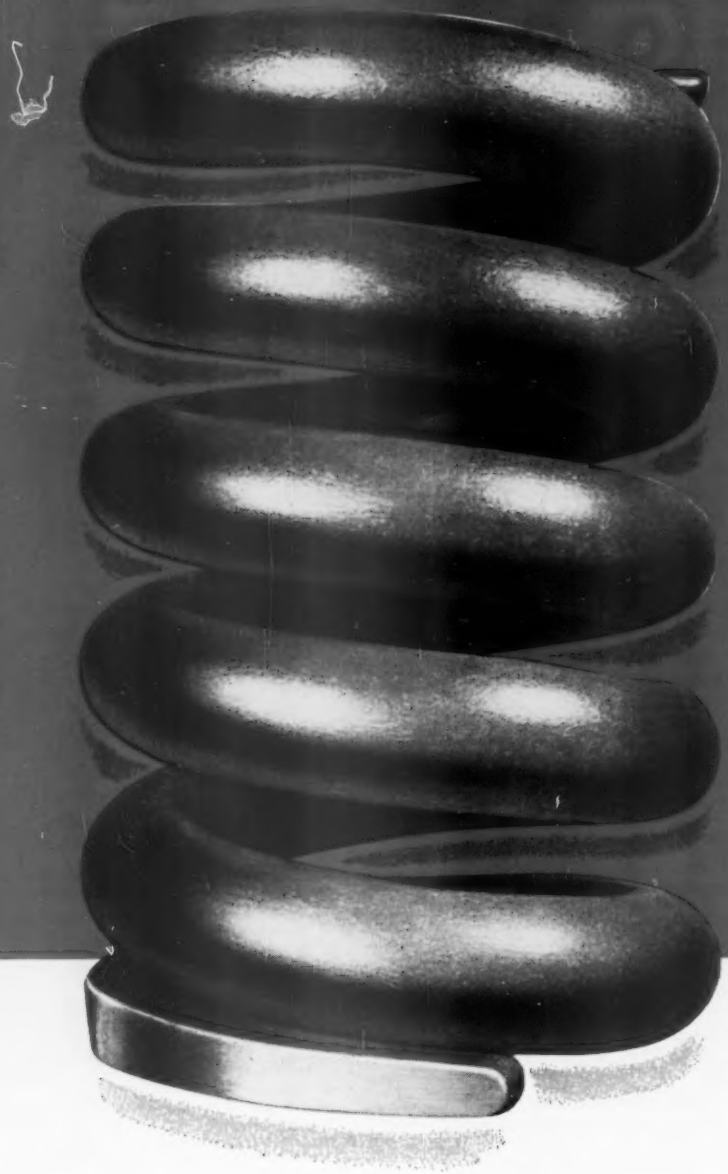
**PEORIA & BUREAU VALLEY.**—$2.12½, semiannual, paid February 8 to holders of record January 31.

**PHILADELPHIA, GERMANTOWN & NORRISTOWN.**—$1.50, quarterly, payable March 4 to holders of record February 20.

**PITTSBURGH, FT. WAYNE & CHICAGO.**—common, $1.75, quarterly; 7% preferred, $1.75, quarterly, both payable April 2 to holders of record March 8.

**PITTSBURGH & WEST VIRGINIA.**—40¢, quarterly, payable March 15 to holders of record February 13.

# LOOK AT



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# Questions and Answers

Of current interest

to the Transportation Department

**Has the idea of the coffee break hit the railroads? What have been its effects on productivity and morale . . .**

**?**

We gave an answer to this question in the January 7 column. At that time I promised you something on timing the break. Here it is.—*G.C.R.*

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

## Yes. Proper timing improves productivity.

"When two 15-minute breaks a day, which many firms have, are translated into 16 days per clerk-year 'paid for—not worked,' many persons begin to wonder if there has been enough investigation of the effects of the coffee break.

"Most companies with any sort of break, at least feel that they get increased productivity from their employees. The timing of these breaks probably decides the degree of this increased productivity.

"A typical worker production curve shows production increasing at the beginning of the day, as the worker warms up, then decreasing throughout the morning, followed by a rise a little before lunch. A brief second warm-up follows lunch, then production falls further during the afternoon, then rises again in anticipation of quitting time. Psychologists tell us that the production decrease in this particular pattern is due more to boredom and fatigue than to fatigue alone.

"Timing a coffee break is somewhat in a class with pinpointing the time for a stock purchase—i.e., both should be done at the low point in the cycle. By placing the break here, we start off with a back-handed benefit—we lose the least amount of production. On the positive side though, we know that daily production generally has a morning cycle and an afternoon cycle. We know that these are cycles rather than steadily declining curves, because of the production climb in anticipation of lunch and quitting time.

"We also know that these anticipatory spurts are due to the fact that boredom, which has made the production rate drop to a level which is lower than that which fatigue alone would have brought on, is dissipated. Therefore, we may assume that when we 'straddle' these low points with a break we will flatten out the overall decline and raise the rate just preceding the break in a pattern similar to that found just before lunch and quitting time.

"The Ohio Manufacturers Association recently completed a survey on coffee breaks in over 600 firms of all sizes and types. The 'official' breaks reported were usually in mid-morning and mid-afternoon. Such timing is not close enough to the low point in the cycle (frequently) to be followed blindly. And it suggests one very important fact: trying to prove or disprove the value of a break by comparing the production of one office or company, with a break, to another, which does not have a break, is useless.

"The whole problem of 'morale,' including the previously mentioned boredom, varies so widely that having a break at a certain time or for that matter even having a break at all, because Company 'X' did so and found that this increased production five per cent is nothing more than 'keeping up with the Joneses.' The blunt truth in this or any other plan touching on employee morale is that the worse your morale is to begin with, the better showing you'll have by putting in any plan to increase it. This all means that each group reporting to a major supervisor, and coming into daily contact with him, should be studied independently. But whatever size of study unit a particular management decides upon, it should make the study and determine its own break time if it has any hope of increasing its production enough to compensate for the time lost during the break.

"A recent U. S. Department of Labor study indicated that about one-quarter of all wage agreements have 'coffee break' clauses, and we all know that there are many more informal agreements. If these breaks are permitted to run on their own with little thought to 'when,' we will see more 'second breakfasts' which will fall at what would otherwise be the most productive period of the day and add to costs instead of increasing production—*A. C. Weamer, assistant auditor revenues, New York Central.*

# NEW POWER...NEW LIFE...NEW "LOOK" FOR YOUR OLD STEAM WRECKER...

## *With L. B. Smith Diesel Conversion*

The 29-year-old Long Island locomotive wrecking crane shown above has just been completely modernized in our shops. Conversion from steam to Diesel has added years of service, increased efficiency and reduced operating costs on this 150 ton Brownhoist.

Conversion included plenty of power in a GM Diesel with Twin Disc torque converter. Clutches are air-operated by a Westinghouse compressor. The new "Look" benefits the operator, for he now has a complete view of his work from the cab which has been relocated in a right front position. All controls have been placed in the same arrangement with which he is familiar.

This is one of some 50 cranes modernized by L. B. Smith personnel. With a major portion of our large plant facilities devoted to the repair of cranes, shovels and heavy equipment, we make every possible effort to keep the quality of our work equal to the reputation we have earned over the years.

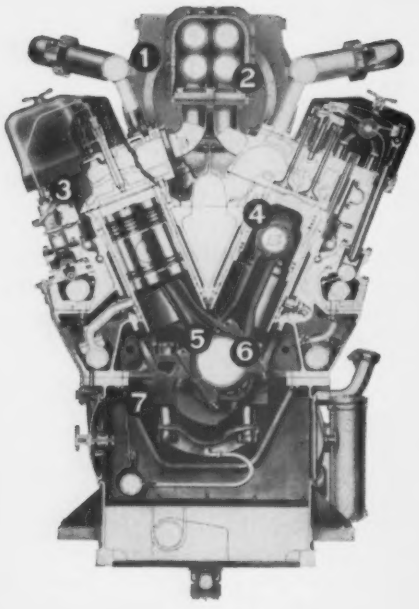
If your Dieselization program includes the conversion of wrecking cranes, you will undoubtedly benefit from discussing it with us.

***For complete information, phone or write***

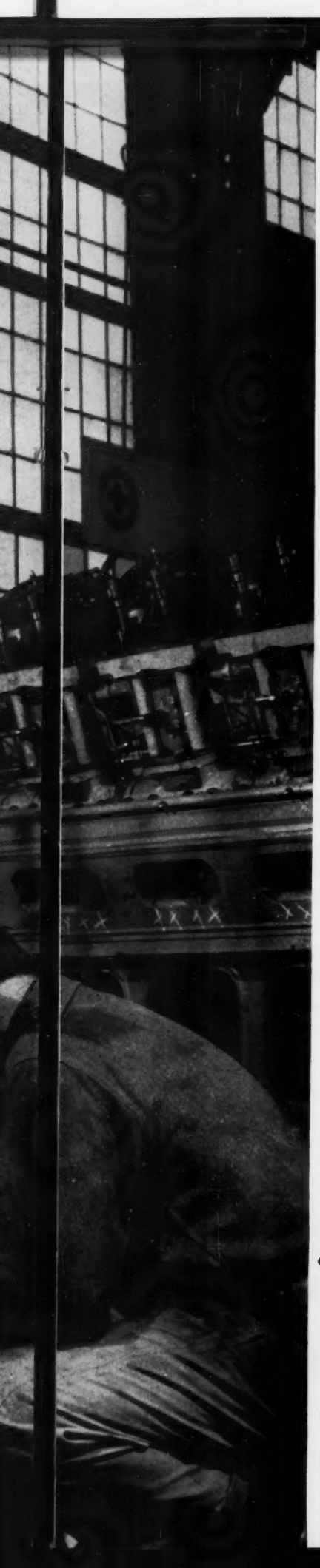
**L. B. SMITH, INC.**

CAMP HILL, PENNSYLVANIA

Telephone (Harrisburg) RE 7-3431




Cross section of 244 engine shows major improvements accomplished in reprofiting: (1) water-cooled turbo; (2) Ni-Resist exhaust manifold; (3) high-pressure fuel injection system; (4) Ni-Resist insert pistons; (5) grooveless and partially grooved bearings; (6) hardened, chrome-plated crankshaft; (7) serrated cylinder block and caps.



# REPROFIT

## YOUR LONG-SERVICE ALCO LOCOMOTIVES

**New ALCO program reduces maintenance costs, raises locomotive availability; returns are large for small investment**

We call it "reprofiting"—a way you can obtain a much higher return on your long-service ALCO 244-powered locomotives at a small investment. It's a return that—if you are operating more than a few locomotives—can run into six figures a year. That's important money, and this is how reprofiting works to gain it for you.

**Reprofiting lowers the operational cost per mile** of long-service locomotives. Diesel-engine design and performance standards have changed markedly in the past ten—or even five—years. Substantial design improvements have been made in the 244 engine, particularly in areas where maintenance was high. Result: engine maintenance costs can be reduced materially by the reprofiting process, which includes application of improvements such as hardened crankshaft, better bearings, water-cooled turbo, Ni-Resist exhaust manifold, serrated fit between caps and block and others.

**Reprofiting adds locomotives to the fleet.** Programs nearing completion have demonstrated that substantial increases in mileage per month per unit are the result. Design improvements provide increased service life and assure greater dependability.

**The cost of reprofiting is low.** And the least expensive way to accomplish it is through ALCO's programmed plan. ALCO has the equipment, the personnel and the techniques to accomplish this work at the best price. All work done in ALCO reprofiting, as well as the parts applied, is covered by an ALCO warranty.

**We hope you will investigate reprofiting.** Your ALCO representative can give you more details, and he will work with you in developing specific data and in drawing up a reprofiting plan. Or, if you wish, you may initiate action by writing Transportation Products Division, Dept. TR-2, P.O. Box 1065, Schenectady 1, N.Y.

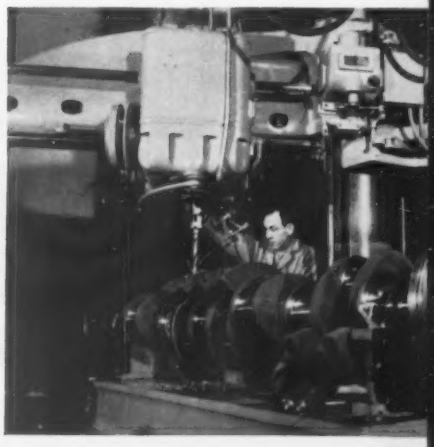
ALCO

**ALCO PRODUCTS, INC.**

NEW YORK

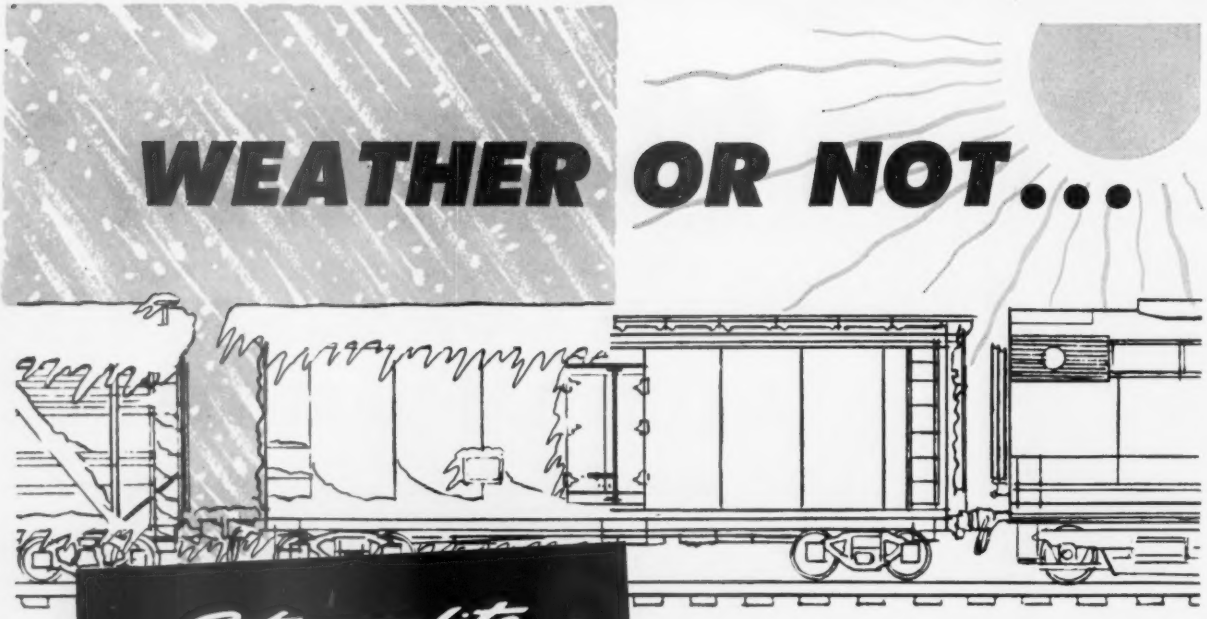
Sales Offices in Principal Cities

ALCO completely remanufactures 244 engines in reprofiting schedule. Engine is dismantled, cleaned, parts repaired, major improvements applied. ALCO's programmed plan of reprofiting incorporates best features of unit exchange and repair-and-return.



Special ALCO facilities, such as those for chrome-plating crankshafts, lower the cost of reprofiting for you. You also get the advantage of work done by specialists who know the engine best. Shaft, right, has been chrome-plated for hardness and machined back to original dimensions, now is being balanced. Cost: a fraction of that of a new shaft.

# WEATHER OR NOT...



## Streamlite HAIRINSUL

***protects perishables under all conditions***

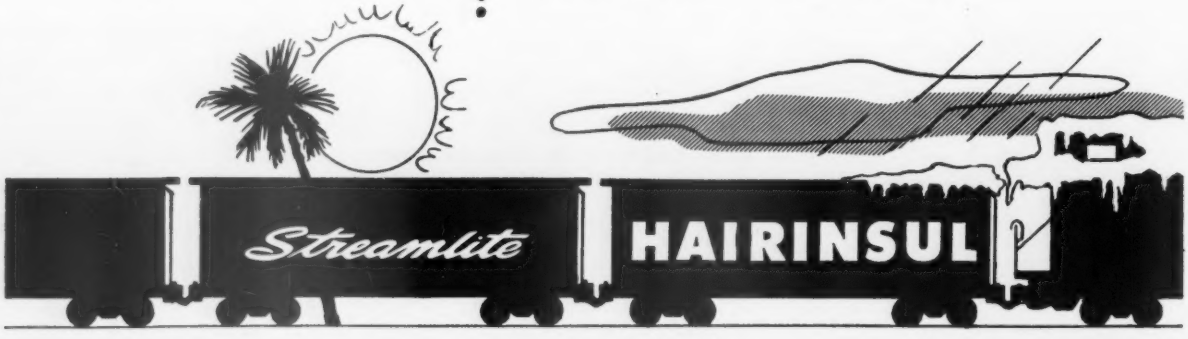
**SIX MAJOR REASONS WHY LEADING REFRIGERATOR CAR LINES SPECIFY *Streamlite HAIRINSUL***

1. **LOW CONDUCTIVITY.** Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity—.25 btu per square foot, per hour, per degree F., per inch thick.
2. **LIGHT WEIGHT.** Advanced processing methods reduce weight of Streamlite Hairinsul by 40%.
3. **PERMANENT.** Does not disintegrate when wet, resists absorption. Will not shake down, is fire-resistant and odorless.
4. **EASY TO INSTALL.** Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall sections between fasteners.
5. **COMPLETE RANGE.** Streamlite Hairinsul is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other specified coverings are available.
6. **HIGH SALVAGE VALUE.** The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

***Car building engineers have long recognized that Streamlite HAIRINSUL is the most efficient insulation under all operating conditions. A half century of successful use is proof enough that service conditions never retard its high insulating efficiency.***

***Not only is Streamlite HAIRINSUL a one-time investment; it actually outlives the life of the car and can be salvaged in perfect condition for use in new cars.***

**AMERICAN HAIR & FELT COMPANY**
Merchandise Mart • Chicago, Illinois




***SETS THE STANDARD BY WHICH ALL OTHER REFRIGERATOR CAR INSULATIONS ARE JUDGED***

# the SOO LINE is the 100th railroad to select Motorola 2-way radio

**Motorola consistently supplies more railroad radio than all others combined . . . factual proof of advanced engineering, superior performance, and unequalled quality.**

Like the communications officials and supervisors of the 99 other railroads now using Motorola equipment, Soo Line executives weighed cost against value in making this choice. Other factors, of course, influenced all 100 users; each providing good reasons for their final decision.

Some chose Motorola because of quality—the finest equipment, built to "take it" and proven in use to outlive and outperform any other. Some chose Motorola because of product diversification—only in Motorola could they find *all* the specialized equipment needed to give them a *complete* communications system for mainline, yard and maintenance applications. Others based their decision on Motorola's broad railroad experience and the intelligent help they received in planning, installing and using their system. Still another reason was the years-ahead planning that provides "obsolete-free" design.

All these sound, solid reasons (and there are many more) explain why Motorola is *first* in 2-way railroad radio with many thousands of units now in use. Before you decide on *any* radio, talk it over with a Motorola Communications Engineer and learn why Motorola supplies *more* railroad radio *than all others combined.*

*FIRST IN 2-WAY RADIO FOR EVERY RAILROAD USE*

- YARD AND TERMINAL
- END-TO-END
- TRAIN-TO-TRAIN
- TRAIN-TO-WAYSIDE
- WAYSIDE-TO-WAYSIDE
- CAR CHECKING

**MOTOROLA** RAILROAD RADIO

Motorola Communications & Electronics, Inc. • 4501 Augusta Boulevard • Chicago 51, Illinois

**SPECIALISTS TO THE RAILROAD INDUSTRY IN 2-WAY RADIO—PORTABLE RADIOPHONES—MICROWAVE**

**THIS SWITCHING EQUIPMENT automatically sorts wheel report information and prepares car reports.**

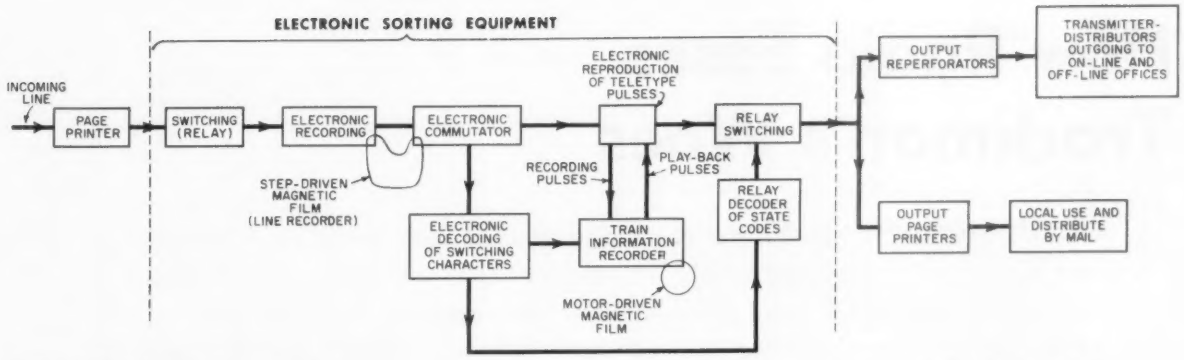
# Why Automatic Car Reporting?

The Rock Island does it to save time and money. When a Rock Island traffic representative comes to work in Lincoln, Neb., in the morning, he has a complete report on all car movements during the preceding 24 hr on the RI lines which have to do with cars originating in or destined to the state of Nebraska. Although the bulk of car reports are transmitted during the night, reports will flow throughout the day into this Lincoln office. Similarly, men in 65 on-line and off-line offices receive reports covering some 9,000 cars daily, moving over the RI's 8,000 miles of line.

## Here's What the Wheel Report Looks Like

The Rock Island has standardized wheel reports, each report having one or more 8½ by 17-in. sheets. Each sheet holds information for 16 cars, the data for each car requiring two lines. This car information includes destination state, origin state, initial, number, load or empty, contents, kind, net and gross tons, etc. The train information, which occupies one line on the report, includes train number, date, hour of leaving the yard and station.

The switching code 59/59 is to "alert" a check page printer in the telegraph office which registers the beginning, the end of each wheel report sheet, and the end of the wheel report as it is processed by the switching equipment. Thus the general telegraph office has a page copy of all information processed by the automatic switching equipment.




**WHEEL REPORTS enter at the left, are processed through the automatic switching equipment (between vertical dash lines) and car reports flow out at the right. Each car on a wheel report is the basis for two car reports.**

## Seven Steps to Car Reports

The Rock Island's big time saving is in the general telegraph office in Chicago, where all wheel reports are sent from the major yards. These wheel reports are broken down so the information on each car is reported to traffic offices concerned with the car's origin and destination.

For each car on a wheel report, two car reports are prepared.

Formerly this wheel reporting "sorting" process was done manually. By means of special coding on the wheel report, the incoming Teletype circuit is connected to the automatic switching equipment, where the report is recorded on magnetic tape. The tape is "read" by the electronic equipment, which then actuates Teletype equipment to make a perforated tape with the car report information. This automatic switching equipment thus does in several "sorts" the wheel report and prepares car reports in a few minutes, which formerly would take an hour or more.

*(Continued on page 28)*

TO. RHA

PLACE IN FIRST LINE OF EACH CAR THIS SYMBOL

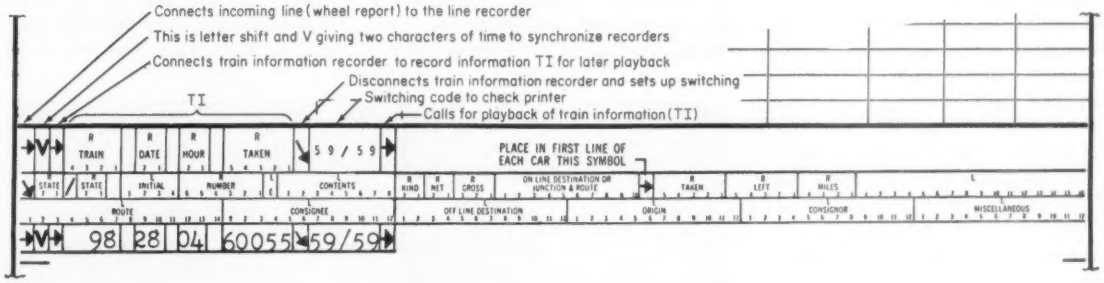
R – Means maintain straight perpendicular columns from right hand side.
L – Means maintain straight perpendicular columns from left hand side.
Numbers used with "R" & "L" indicate number of spaces in each column.
Maintain margins as indicated below and do not write across column lines.

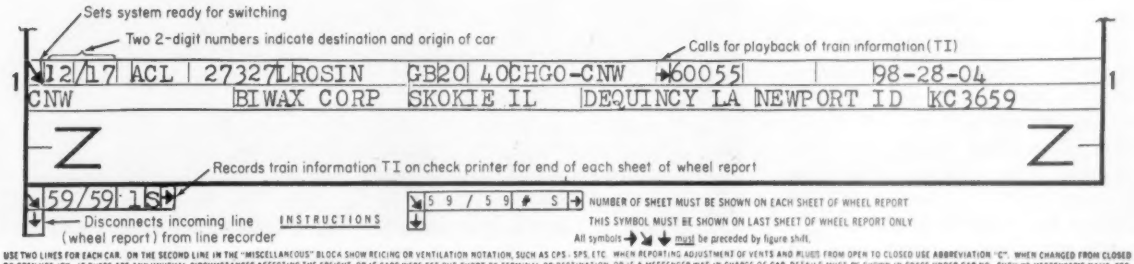
**ROCK ISLAND LINES**
**"51" REPORT**

Form C. T. 264 Rev.
Wheel Report

MO-KAN DIVISION REPORT OF CARS HANDLED EAST BOUND SHEET NO. 1

| TRAIN | ENGINE | CONDUCTOR | CABOOSE | FROM | DATE | TIME | LOADS | EMPTIES | ARRIVED AT | DATE | TIME | MILES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 98 | 429 | E JOHNSON | 79241 | KAN CTY | 8-28 | 420A | 77 | 28 | | | | |





Sets system ready for switching
Two 2-digit numbers indicate destination and origin of car
Calls for playback of train information (TI)
1 12/17 ACL 27327L ROSIN GB20 40 CHGO-CNW 60055 98-28-04 1
CNW BIWAX CORP SKOKIE IL DEQUINCY LA NEWPORT ID KC3659
Z Z
Records train information TI on check printer for end of each sheet of wheel report
59/59 1S
Disconnects incoming line (wheel report) from line recorder
INSTRUCTIONS
59/59 # S
NUMBER OF SHEET MUST BE SHOWN ON EACH SHEET OF WHEEL REPORT
THIS SYMBOL MUST BE SHOWN ON LAST SHEET OF WHEEL REPORT ONLY
All symbols must be preceded by figure shift.

USE TWO LINES FOR EACH CAR. ON THE SECOND LINE IN THE "MISCELLANEOUS" BLOCK SHOW REICING OR VENTILATION NOTATION, SUCH AS CPS - SPS, ETC. WHEN REPORTING ADJUSTMENT OF VENTS AND FLUES FROM OPEN TO CLOSED USE ABBREVIATION "C". WHEN CHANGED FROM CLOSED TO OPEN USE "O". IF THERE ARE ANY UNUSUAL CIRCUMSTANCES AFFECTING THE FREIGHT, OR IF CARS WERE SET OUT SHORT OF TERMINAL OR DESTINATION, OR IF A MESSENGER WAS IN CHARGE OF CAR, DETAILS MUST BE SHOWN IN SPACE UNDER CAR NO., SUCH AS MESSENGER'S NAME, ETC.
MAIL ORIGINAL REPORT TO AUDITOR CAR SERVICE ACCOUNTS, CHICAGO, ILLINOIS

# How Radio Eases Trackman's Woes

MORE ON-TRACK TIME is one of several advantages being reaped today through the use of radio communication by maintenance-of-way and bridge and building forces. On some roads, entire gangs are being radio-equipped and supervisors' vehicles and motor cars are being fitted with radio equipment. All with one objective: improved efficiency.

SOME OBSTACLES yet lie in the path of more extensive utilization of radio in maintenance work. One by one, these "bottlenecks" are being eliminated. Radio equipment is becoming lighter in weight, more powerful, more economical, and simpler to operate.

MANY MAKES AND MODELS of radio equipment are available to railroads today. In making his selection, the maintenance officer must take into account many factors—such as distance to be covered, availability of power sources, and the rough treatment to which the equipment will be subjected.

Day by day, new uses are being found for radio communications in track work. Many gangs are now radio equipped. Foremen can now talk with the operators of individual track machines, with their flagmen, and with the crews of approaching trains. Supervisors, with radio equipment installed in their offices and automobiles, can talk with their gang foremen and keep themselves informed on up-to-the-minute developments. Bridge and building gangs can be dispatched where needed by means of two-way radio installed in trucks.

The lone track inspector, equipped with a small lightweight portable radiotelephone, can cover more mileage per day, knowing at all times the status of approaching trains. Radio has proved itself indispensable in emergencies. Wrecking cranes, routed to the scene of trouble with utmost efficiency, are directed in their work by radio communications.

The equipment complement of the large mechanized gangs that now tour the nation's railroads renewing ties, surfacing track, laying rail, etc., represents a considerable investment. To secure the greatest return on this investment, it is imperative that these machines spend as much productive time on the track as possible.

All too often a track gang, of necessity, must set its machines off the track to allow for passage of oncoming trains. There used to be many instances where these trains—running behind schedule — caused track gangs to remain inactive for periods as long as an hour. "The lineup said No. 14 would be through here about 2:30," explained one gang foreman to his roadmaster. "How was I to know he was late?"

Today, this sort of condition is being corrected. Management, examining the problem, has been led to a single conclusion: improved, interdepartmental communication is sorely needed.

### *In the Beginning . . .*

Back in '46 railroads began to use radio communications to improve their operating efficiency. Radio had been greatly improved as a result of intensive activity in the electronics industry during World War II. Radio equipment was installed in locomotives, cabooses, and wayside stations and at terminals. The net result: a

**TRAIN SIGNALS required during unloading of continuous-welded rails are given to engine crew by radio-equipped trainmen at rear of work train.**

**FLAGMAN, with portable radio hung from antenna tripod mount, can talk with track foremen and train crews.**

**FOREMAN of truck-equipped track gang keeps roadmaster informed of developments, and can be summoned on moment's notice.**

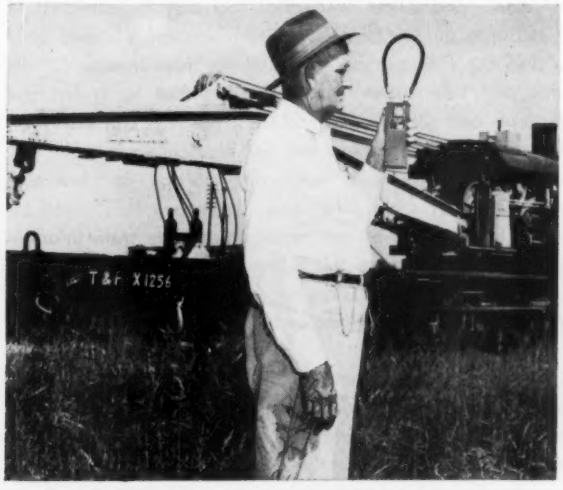
reduction in delays and, generally, improved train operation.

As this equipment was installed, it became possible for train crews and dispatchers to know quickly just where everyone else was on the railroad. But not so the track men. Radio equipment, at that time, was considered too bulky for maintenance use. Labor agreements, which had to undergo considerable amendment to permit the use of train radio, had to be modified even further in some cases to permit foremen to talk with the dispatchers, operators and crews of approaching trains.

There are yet a few "growing pains" to be overcome insofar as equipment is concerned; the manufacturers are doing much to master the problems of weight, size and power. Many roads now have agreements which permit more direct communication than was possible in the past. Others have contract modifications "in the works."

Small portable and mobile radio equipment often lacks the power to "get through" to, say, the dispatcher's office, some distance away. Wayside stations pick up these relatively weak transmissions and relay them to their destination.

Let us assume that a typical maintenance officer has approval and an appropriation and is ready to begin to buy radio. Where does he start? He knows which machines and vehicles should, for maximum effectiveness, be radio equipped. He knows which personnel should be equipped with portable radiotelephones. Now




**IN EMERGENCIES, wreckers can be dispatched where required and directed by portable two-way radio.**

**GRADING EQUIPMENT, too, can be radio equipped for increased efficiency through coordination of machines.**

he must estimate the maximum range over which each unit of radio equipment must operate. To this figure he must add a margin of safety for those times that atmospheric and other conditions might hamper communications. He will probably want radio equipment which will operate on two or more "channels." One, for intragang communication — the other for talking to train crews, operators, etc.

The equipment he buys must be capable of withstanding the rigors of trackwork. Shock mounting is of prime importance; two days' service on a tamper will give a piece of radio equipment as much vibration as, perhaps, two years of automobile service. Weatherproofing is another "must."

### *What Kind to Buy?*

There are various types of radio equipment available that meet the requirements of maintenance work. Generally, most of the two-way radio equipment designed for mobile use (i.e., installation in automotive-type vehicles) can be successfully installed and operated on most classes of track maintenance machinery and, of course, in automobiles and trucks. Spreaders, ditchers, plows, ballast cleaners and, perhaps, some tamping machines may warrant the installation of heavy-duty train-type radio. Portable handheld or shoulder-strap-supported sets have considerable utility. Many of the units operate from practically any available power source.

Furnishing power for the operation of radio equipment is a problem which must be solved in each particular instance. Radio for use on a motor car will, most probably, be powered by the car's storage battery, or, perhaps, from a separate generator-charged battery. On larger machines, it might be desirable to install a generator-type power source. Portable units will, of necessity, be self-contained.

The trend in radio equipment today is toward lower and lower power requirements. Transistors and miniature-type tubes do not require as much power as did older components. Research is constantly lowering these power requirements further and finding additional power sources.

Once he gets his forces equipped with radio, the maintenance officer will find that a certain amount of maintenance will be needed on the equipment. Normally, if the road has radio maintainers who service train, wayside and base station equipment, maintenance will be handled by the communications department. Such maintenance may consist of field repairs, or complete replacement while the defective unit is sent to a central repair point. With proper care, the required maintenance will be little. Manufacturers, too, maintain radio service facilities throughout the country. Machine operators, formen and others who use the equipment should be fully instructed, not only in the operation of the equipment, but also in the proper methods of preventive maintenance.

Our M/W officer, once he has his forces radio-equipped, will find that he has, at least, found a cure for one of his major "headaches."

## Car Reports

*(Continued from page 25)*

**STEP 1** Wheel report comes into general telegraph office on Teletype circuit, where by special coding (upper case F), the incoming circuit is connected to the automatic switching equipment.

**STEP 2** Wheel report information is fed into the automatic switching equipment where it is recorded on magnetic film on the "line" recorder.

**STEP 3** "Line" recorder is played back and the train information (train number, date, etc.), is re-recorded on another tape unit, known as the "train information" recorder.

**STEP 4** Car information (destination state, origin state, etc.) is "read off" the line recorder magnetic film and the electronic switching equipment selects (according to the state codes on the wheel report), the proper outgoing circuit to a reperforator, which prepares a punched tape.

**STEP 5** Switching equipment "calls" the train information recorder to "play back" the train information, which is also put on the outgoing reperforator circuit. Thus the car report contains the car information and the train information.

**STEP 6** This outgoing circuit is disconnected and the switching equipment selects the next circuit as "ordered" by the state codes on the line recorder magnetic tape.

**FINAL STEP** Operators take the perforated tape containing the car report information, and feed it into transmitter-distributors for the outgoing circuits to the on-line and off-line traffic offices. Also copies are made on output page printers for local use and distribution by mail.

## *Magnetic Film Is an Ideal Storage Medium*

Standard 35 mm magnetic film with sprocketing is used in the "train information" and "line" recorders. Several advantages of film are (1) reusable quality because the information is stored only temporarily, and the film can be "erased" for further use; (2) it's easy to "pick off" information from the film, that is, it has the play-back feature; and (3) being sprocketed, the film can easily be "stepped" for receiving information and for playing back.

Seven line recorders provide temporary storage for incoming wheel reports, and four train information recorders hold train information ready for insertion on car reports. Separate train information recorders are used because this information appears only once on the wheel report, but must be inserted on the added part of outgoing car reports. Thus this information is "played back" repeatedly during the sorting process.

This system was designed and installed by Rock Island communications department employees under the jurisdiction of C. O. Ellis, general superintendent communications and signals, and C. J. Nelson, assistant superintendent communications, engineering. The electronic switching equipment was developed and constructed by the Stromberg-Carlson Division of General Dynamics Corporation.

**EXPERIMENTAL UNIT with 6-ft sliding and 6-ft "plug" doors is one way cars are . . .**

# 'Specialized'...to Suit More Shippers

**PROBLEM—Grain and lumber shippers have seldom been compatible on the matter of box car doors. Lumber men want wide doors to permit modern materials handling methods in loading and unloading. But such wide doors won't do for grain, and railroads get caught in the middle.**

**SOLUTION may now be at hand. It's a basic box car with 16-ft staggered doors—a conventional 8-ft sliding door and an 8-ft "plug" door on each side of the car. Both doors open or the sliding door will work alone.**

**RESULT: An all-purpose "specialized" box car that promises to please nearly everybody.**

A general purpose 50-ft box car, having two wide, staggered openings, one on each side, offers one solution to the growing demand for a universal car to handle not only mechanized and palletized loading, but also bulk shipments, without additional expense.

Working in cooperation with the railroads and shippers, the Youngstown Steel Door Company developed this "double door" arrangement—one 8-ft sliding "plug" door and one 8-ft conventional sliding door. Doors work independently to give a 16-ft opening on each side of car.

The conventional corrugated door is supported for movement by a plate track, which also supports the sliding plug door.

The plug door, based on a design primarily for refrigerator and insulated box cars, consists of a metal panel reinforced with structural members.

The desired thickness of the door is obtained by wooden members so that it is flush with both inside and outside of the car when seated in the door opening. The plug door is equipped with the Camel screw type door mechanism, which serves to shift the door laterally into and out of the

**BIG OPENING gives lumber shippers room to maneuver fork lifts.**

door opening, and to support the door for movement along the track. When closed, the flush door fastens securely to the car wall, providing an efficient seal.

The front edge of the flush door is overlapped by the sliding door so that the latter serves to brace the flush door against the outward pressure of loading within the car.

The locking mechanism at the front edge of the flush door has an operating lever so arranged that a grain door cannot be nailed to the sliding door, and the sliding door cannot be closed unless the front edge of the flush door is properly locked. In a closed position, the sliding door prevents movement of the lever of the locking mechanism of the flush door, thus preventing its opening.

With both doors open, the 16-ft opening provides ample space for maneuverability of mechanized equipment in loading and unloading packaged and bundled materials or palletized commodities.

When used for grain loading, with the flush door becoming an integral part of the car wall, protection is necessary only on the inside of the 8-ft sliding door, making the cost of dunnage the same as on a single door box car.

The AAR's Committee on Car Construction gave the wide door design a favorable nod recently when it suggested that railroads contemplating ordering new box cars should examine the 16-ft staggered door arrangement to see if it will meet their needs. Furthermore, it is suggested that by concentrating on a door arrangement of this size, cars of this type can be built at less cost. The committee said it also considers it desirable to maintain the principle of one plug type door and one sliding door on each side.

Three railroads have some 3,500 cars of this type on order, the SP with 2,900 from company shops, and the UP with 500 under construction at Omaha. Twenty-five UP cars are already in service.

The GN, as reported in Railway Age, Dec. 3, 1956, p. 7, has five experimental cars in test service. These cars are 40 ft long, with a 6-ft plug door and a 6-ft conventional sliding door on each side, providing a maximum opening of 12 ft.

While the western railroads have been first to adopt this design of car, AAR people feel that it is in no sense a "regional car," but one that is adaptable to all parts of the country.

## Railroading After Hours with Jim Lyne

**FOUL-WEATHER PATRONS**—Operating Vice-President M. I. Dunn of the Chesapeake & Ohio recently received a telegram from a personal friend. It was a semi-serious complaint about his experience as a passenger on a train delayed several hours by heavy rains. Mr. Dunn's reply, also a telegram, read:

*If the planes could have flew,*
*It wouldn't have happened to you.*

Which strikes a good-humored note on which to open up a subject which isn't very funny—that is, the way the trains are suddenly jammed with people on the days the weather is too bad for the planes to fly. Somebody surely ought to invent some way of identifying regular train-riders, and arrange to give them space preference over the foul-weather-only passengers.

For example, if a patron habitually cancels half or more of the reservations he makes, why should he not be down-graded, entitled thereafter to advance assignment of nothing better than railroad uppers or other hard-to-sell space?

Air travel is a legitimate business and often a great public convenience—but it's scarcely fair that its inconveniences (such as the need for stand-by service) should have to be shared, also, by regular railroad patrons.

**WHY SERVICE IS SLOW**—I received an instructive letter recently from an operating officer who outlines one good reason why it sometimes takes a car of freight four or five days to go a couple of hundred miles. A car is delivered on Friday to a branch line that has only five-days-a-week local service. The car misses Friday's local because the billing is late in arriving from the shipper. So the car doesn't get moving till Monday. It makes all its connections and arrives at its destination Wednesday.

This isn't faulty operation. The fault lies with the 5-day week, and the failure of the shipper to deliver billing along with the car. Maybe somewhat closer relations between railroad and shipper would make sure that Friday's freight gets a little better treatment than it sometimes does. Since it's usually the railroad that gets the blame in such cases, perhaps some system of advising consignees of delays not attributable to the railroads would be in order.

**OVERPASS SLOGANS**—I am beginning to get some suggestions for slogans on highway overpass girders, which would call attention of motorists to the existence of railroad freight service—hence little need for heavy freight service by highway. William E. Deaton of the Elgin, Joliet & Eastern suggests:

*Route freight up here*
*Keep highways clear*

Bill thinks there is enough creative talent in railroad PR offices to come up with something good, and he suggests I offer a modest incentive to get this talent to work.

Robert Scott of the Atlantic Coast Line likes "Your best bet—ship by rail," followed by the name of the railroad. But some spoil-sport now tells me that highway departments will not permit advertising matter to be lettered on these overpasses. I hope he is mistaken.

Somehow the message must be conveyed to the public which seldom rides trains—that the railroads are just as much on the job and as indispensable to the public as they ever were.

# Locomotives Are 'Deteriorating'

## . . . SAYS ICC INSPECTION BUREAU

The U.S. diesel locomotive fleet is in poorer condition than heretofore, according to the 1956 report of the ICC's director of locomotive inspection.

The 45th annual report summarizes its findings by stating "The increase in the number of locomotives found defective, the number of defects found, the percentage of inspected [locomotives] found defective, and in the number ordered out of service is a reflection of the deterioration resulting from increasing age of the now predominating diesel power."

Nearly eleven per cent of the units inspected during the year were found defective, and the number of units ordered out of service jumped from 127 to 492. Tougher federal inspections and failure of railroads to keep their aging motive power in "like new" condition could play a part in the poor results achieved.

Accidents decreased 12 per cent and injuries dropped 44 per cent. A year ago a locomotive wheel failure in passenger service accounted for a large number of non-employee injuries. No such incidents occurred in the past year.

For the past three years the number of units inspected by each inspector has remained about constant, but the director's report indicated that insufficient travel funds did not allow district inspectors to travel throughout their districts so that outlying terminals were not visited with the same frequency as in the past.

This non-uniform enforcement pattern has now been changed because additional travel funds were appropriated for fiscal 1957. "Neglected" inspection points can now be covered.

### *Inspectors' Conferences*

J. A. Hall, director of locomotive inspection, reported that during the year conferences were held at convenient points between officials of the Bureau of Locomotive Inspection and district inspectors. Policy, uniform inspection and enforcement procedures, individual inspection problems, and new locomotive designs were discussed.

All district inspectors are advised of details and causes of unusual accidents to better assist in their educational contacts with railroad personnel. Monthly current-activities bulletins covering accident investigations are forwarded to the district inspectors.

Multiple-unit electric cars were made subject to the Locomotive Inspection Act on April 1, 1956. "Rules and Instructions for Inspection and Testing of Multiple Operated Electric Locomotive Units Designed to Carry Freight and/or Passenger Traffic" have been issued. Because specifications for these m-u cars had to be filed when they were brought under jurisdiction of the director of locomotive inspection, the total number of "locomotives" reported increased for the first time in many years.

The number of steam locomotives reported continued to decline rapidly. However, all four fatalities occurring on locomotives during the year were due to two steam locomotive boiler explosions. This is in contrast to 1955, when the director of locomotive inspection could report that for the first tim since passage of the Locomotive Inspection Act there had been no boiler explosions.

### *Diesel 'Housekeeping'*

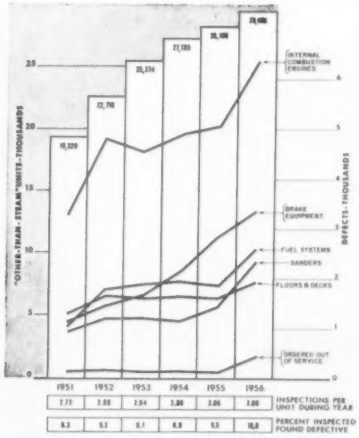
The greatest number of injuries resulted from accumulations of oil on floors, decks and steps of diesel locomotives. The ICC emphasized this a year ago when it promised a crackdown on locomotive "housekeeping." Reported in 1956 were 22 such accidents on diesels. In eleven of these, oil accumulations had been reported from 4 to 29 times prior to the accident. Failure to correct such conditions indicates a "laxity in observance of basic safety essentials," according to the director of locomotive inspection.

The report continued: "Because each oil hazard is a potential source of a disabling accident, district inspectors have been instructed to give close attention to this type of defect particularly on railroads where this condition is prevalent."

Seven crankcase explosions resulted in injury to nine persons. Two of these were caused by defective pistons and the remainder were caused by overheated bearings resulting from lubrication failures. Injuries from cab seat failures dropped from eight to three last year and credit is taken for the "surveillance exercised by district inspectors."

A total of 88,296 inspections were made on the 29,405 "other-than-steam" locomotive units during the year. On these units 9,597 defects were found—10.9 per cent. Principal defect classifications in declining order were (1) internal combustion engines, (2) brake equipment, (3) fuel systems, (4) sanders, (5) cab floors, aprons and deck plates, (6) cabs and cab windows, (7) miscellaneous, (8) motors and generators, (9) trucks, and (10) steps and footboards.

No carrier filed any appeal from the decision of a district inspector during the year. During this same period, there were six cases involving 117 counts for alleged violations of the Locomotive Inspection Act transmitted to U.S. attornies for prosecution under the act.




**OTHER-THAN-STEAM ownership went up little last year but defects and ordered-out-of-service totals jumped sharply upward. ICC has not been able to increase the frequency of inspections.**

THE CENTRAL BEARING . . .

# Why RRs Prove and Approve It

"To provide a better ride"—probably more time and effort have gone into the attempt to achieve that than any other single goal of passenger railroading.

From the days of the oaken bolster to the latest design of outside swing hanger trucks, and from the first open wagons to the modern dome car, giving passengers a better ride has always been of greatest importance. Today, this concern is even more vital with rising competition from other forms of transportation, making traveling comfort one of the railroads' strongest advantages.

A simple, easily installed device, for both new and existing equipment, has gained wide acceptance with railroads. This is the Commonwealth central bearing introduced in 1950 by General Steel Castings Corporation.

Replacing the conventional center plate and side bearings with a single, non-lubricated bearing surface, the central bearing eliminates side bearing noise, gives longer wheel life and reduces maintenance costs. But, most important, General Steel makes the claim that the central bearing "greatly reduces or completely eliminates" shimmy or truck hunting. It is here that the great improvement in the riding qualities of the car is generated. Company engineers have conducted extensive tests to document their claim.

### *A Three-Part Device*

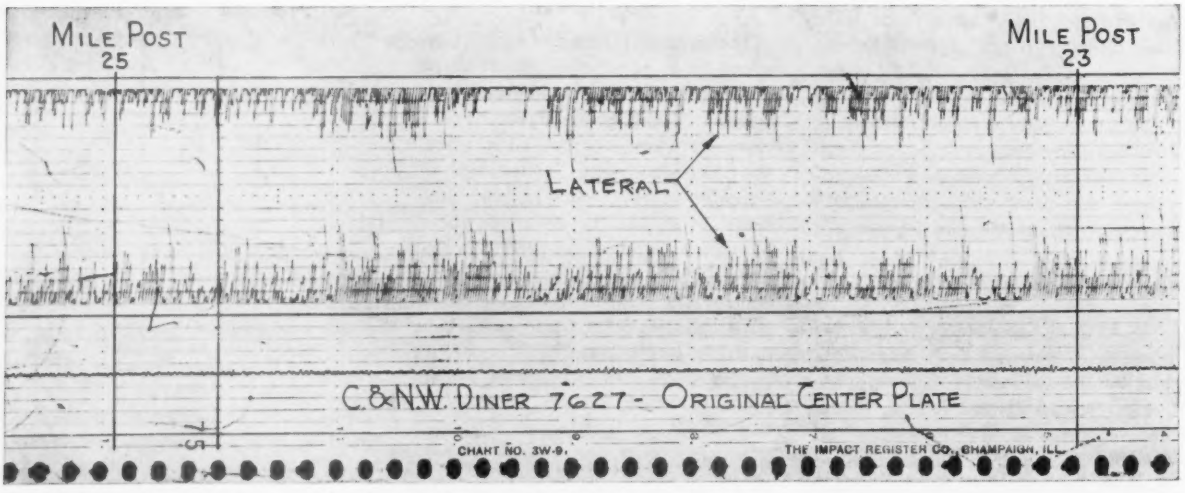
The central bearing is a relatively simple device consisting of three parts —the body central bearing, the truck central bearing and a 1-in. thick nonmetallic compressed friction pad which separates the two. Key to the effectiveness of the design is the distribution of bearing area at radius considerably greater than that of the old center plate. Research determined that a bearing surface with an outside diameter of 24 in. would provide just the correct degree of friction at the proper radius for optimum energy absorption.

The entire load of the car on the truck is taken by the bearing on the friction pad. By making the inside diameter of the bearing 12 in. and providing a total bearing surface of 339 sq in.—over twice that of the old lubricated center plate—General Steel engineers assured the necessary long-wearing qualities of the bearing. As a safety measure, fillers or stools with ¼-in. clearance are used at the sides in place of side bearings, but these would make contact only in case of derailment or other emergency.

The energy-absorbing friction of the bearing has the important function of damping the oscillation of the truck. This oscillating motion is truck shimmy. The motion is inherent with the design of rails, wheels and trucks, but in itself is not annoying or uncomfortable. What makes a problem is for the swivel motion to become resonant—to develop a regularity which acts to increase the frequency of the motion. This can turn a random movement of the wheels a fraction of an inch back and forth into the repeated, higher-frequency vibration of shimmy. General Steel engineers' research has shown that the friction pad provides just enough damping action to prevent the occurrence of a resonant swivel motion, without hampering the free movement of the truck in turning the car.

### *Cares for 'Shimmy'*

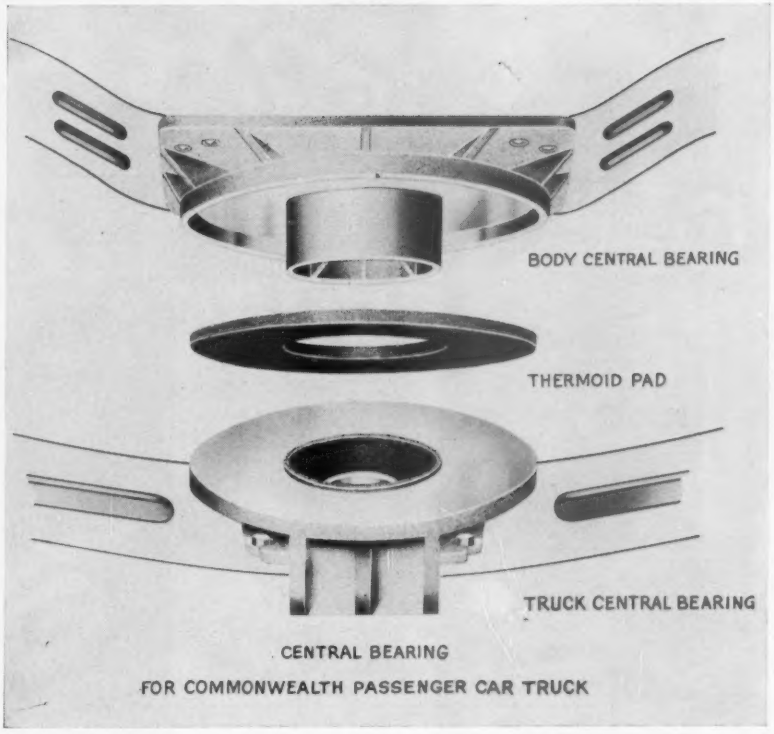
One of the common factors that contributes to shimmy is wheel wear. When wheel treads become slightly worn but still safe and serviceable, they have a tendency to develop the resonant shimmy motion. To combat this, some roads find it necessary to turn wheels at 30,000 to 40,000 miles. Reports from a number of railroads which have kept records on cars




**BEFORE application of central bearings, Chicago & North Western diner with standard center plates developed high frequency lateral accelerations.**

equipped with central bearings indicate that they eliminate wheel turnings which were previously made to prevent shimmy. This prolongs wheel life between turnings—more than triples it in some cases.

Railroads have also reported to General Steel that the central bearing appears to prolong the total life of the wheel. This is attributed to the fact that the central bearing reduces the hunting motion in which wheels slide laterally on the track, which can produce both tread and flange wear. According to one railroad, the central bearing provides "a good ride for the entire life of the wheel."



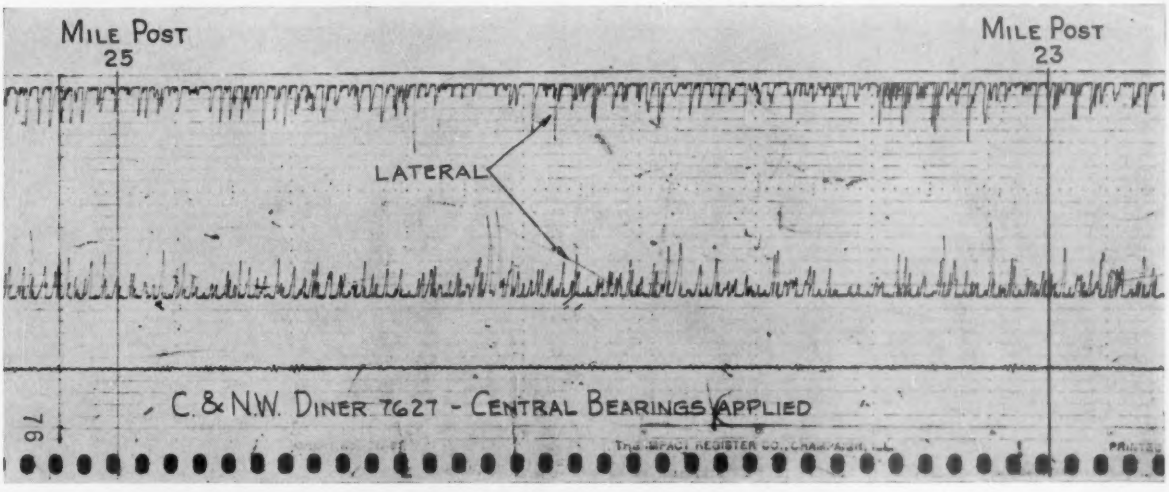

**THREE parts of central bearing assembly—body central bearing, truck central bearing and Thermoid pad—can be applied to existing coach trucks.**

The graphs were made by an automatic ride recorder during two test runs on Chicago & North Western diner 7627 in October 1951. The ride recorder measures lateral accelerations through the action of calibrated pendulums. The amplitude of motion is not measured because that is not what causes discomfort in a car. It is the acceleration, and, even more important, the frequency of lateral acceleration which is of concern in measuring truck shimmy.

The record of a test taken when the car was equipped with the original center plate and side bearings shows a high frequency of accelerations and also shows a regular pattern indicating resonance at about 4.2 cycles per sec. After the car was equipped with central bearings, the record shows how greatly the frequency was reduced and how the resonant pattern was suppressed.

Both tests were run westbound on the same section of track on the C&NW line from Chicago to Milwaukee. Speed on the first test was 90 mph and on the second 91 mph. General conditions and maintenance were identical for both tests. Weather conditions were similar.

While the central bearing is now standard on most new passenger cars ordered by railroads, there are thousands of older passenger cars still operating without this device. General Steel supplies the device in a simple package for replacement use. It can be applied easily and inexpensively to existing cars, according to the manufacturer.




**AFTER central bearings had been applied to diner, lateral acceleration frequency was greatly reduced at same speeds on the same section of line.**

SIDE-TRACKED
DIVIDENDS

*Modern communications can help you*

# Make full use of your rolling stock

Freight cars have to be the breadwinners today. That's why it's worth considering how much out-of-date communications may be costing you, in terms of idle cars and reduced freight revenues.

For example, one railroad found that a modernized communications system gave them two extra working days per month for every boxcar on the line! They did this with a surprisingly small investment, *using wires they already owned.*

Automatic Electric engineers can show you how similar results can be obtained on your road. We'll be glad to work with you and your Communications Superintendent in planning a modern, fully integrated communications system. Specifically, this means fast, automatic dial telephone service, available right where it's needed throughout your entire system. Your own private telephone system gives every employee a clear wire at any time of the day or night, to expedite freight or any other railroad business. It saves you money!

*For an interesting brochure about the road that is getting two extra working days a month from its rolling stock, just write or call Automatic Electric Sales Corporation (HAymarket 1-4300), 1033 West Van Buren Street, Chicago 7, Illinois. Ask for Report No. 105.* In Canada: *Automatic Electric Sales (Canada) Ltd., Toronto.* Offices in principal cities.

AUTOMATIC ELECTRIC

ONE OF THE WORLD'S GREAT TELEPHONE EQUIPMENT MANUFACTURERS

# Why C&O Feels Good About the Future

The years ahead are going to bring a dependable rise in railway traffic and earnings. This is the conclusion on which the management of the Chesapeake & Ohio is doing its comprehensive planning for the future. This heartening outlook was spelled out in detail at a two-day meeting of the officers and supervisors of the company's finance and accounting department at the Greenbrier, White Sulphur Springs, W. Va., on February 7-8. Most of the presentations were dramatized by the use of cartoons, charts and other appropriate visual aids—mainly with a humorous twist.

Leading officers from other departments filled in the details which lend support to this encouraging view to the future. Finance Vice-President John E. Kusik, who presided at the conference, called attention to the growth of C&O revenues from $319 million in 1950 to $419 million in 1956; the increase in per-share earnings in the same period from $4.25 to $8.28; and the rise in net working capital from $25 million to $45 million—as testifying to recent past growth in financial strength.

He predicted a continuing increase in this trend, among other reasons, because the company has taken the necessary steps to augment its export coal traffic; because it is developing its coal and oil properties; and because of its investment in Slick Airways, with the prospect that it will participate in the progress of this rapidly developing transport agency. Speakers did not limit themselves to the outlook for the C&O alone, but spoke in terms of parallel optimism concerning the accomplishments of neighboring railroads.

Operations Vice-President M. I. Dunn and Assistant Vice-President R. N. Begien gave supporting details on how the outlook is affecting the forward planning (including major A&B's) in the operating, engineering and mechanical departments. J. B. Herring, assistant engineer of coal properties, and F. R. Toothman, mining engineer, outlined the prospects for coal traffic growth. And S. F. Witt, assistant to vice-president, merchandise traffic, gave a report on non-coal traffic—which has been showing a pattern of increase paralleling that of the coal traffic.

**"Computerization."** The company's stockholder records (e.g., dividend checks, proxies, statistics) are already handled on the computing machine at Cleveland; and the initial checks will be issued by the machine as of March 1, a program which will become complete during the current year. Revenue and stores accounting are scheduled to be computerized as soon as labor negotiations can be completed. The change-over is resulting in a revolution in the methods and location of record-keeping and computing, with major shifts in personnel; a large-scale training program; and necessitating important negotiations with the labor organizations involved.

One of the speakers at the conference—Comptroller R. F. Brown—compared "computerization" with "dieselization" in its impact on the railroads. That is to say, the new machine will do old jobs more economically and offers great and quite unexpected opportunities to do new jobs in a new way.

**Developing People.** The "spectacular growth" which C&O management expects will be obtained only if the road has "outstanding people" in positions of leadership, Mr. Kusik declared. "That is why we are so intensely dedicated to the development of people. Our future is in the hands of our people, and particularly our younger people."

One purpose of the meeting being that of "management development," the main emphasis of the program was the conveying of information—not only about the detailed operations of the various divisions of the finance-accounting department, but of other principal departments as well.

**Lots of A&B's.** Messrs. Dunn and Begien—in telling of accomplishments and plans of the departments under their jurisdiction—dealt with the attack on the hot box problem, the extension of CTC and radio, application of electronics, and other A&B projects.

Luncheon speakers on the two conference days were General Robert J. Smith, president of Slick Airways, and J. G. Lyne, editor of Railway Age.

**Air Freight.** General Smith revealed himself to be a believer in coordination of the various forms of transportation—the proper goal of all of them being improved and more economical service to the public.

He looked upon transportation as a part of the overall process of production—and one not to be evaluated by the cost of transportation service alone. For example (in behalf of air freight), the cost is higher than surface transport, but it may save a lot of money in the otherwise necessary warehousing of expensive equipment. However, for any given transport job, there is a "best way"—and the easiest method of making sure that that "best way" will be found is to have close cooperation between the various types of transport.

**Railroads' Future.** Mr. Lyne spoke on the "Future of Railroading." He drew attention to recent predictions that railroad freight traffic should increase 40% or more over the next decade; and added that the actual increase could be much more than this ratio, or less, depending on the degree to which the railroads succeed in adapting themselves to their changed environment.

The present-day railroad, he went on to say, is a highly efficient mass-production tool. If the industry concentrates on being just that—and can "scrape off the barnacles" of practices and regulations which adapted the railroads to the entirely different conditions of the past—then there's no reason why the industry should not grow rapidly and become dependably profitable.

The Greenbrier meeting had as its "emcee" William Bamert, administrative assistant to Mr. Kusik—who interpreted each presentation in terms of the central theme of "individual development." Mr. Bamert was also responsible for the production of the meeting, which was highlighted by cartoon presentations, and histrionics designed to augment the goal of education by giving the program some entertainment value, as well.

How permanent is "temporary"?

# YOU STILL PAY THESE "TEMPORARY" TAXES ON TRANSPORTATION

10% tax on passenger fares...

3% tax on freight charges...

## You should have relief from the burden of these World War II taxes—now!

During World War II the Federal Government imposed special excise taxes on the passenger fares and freight charges you paid to railroads and other common carrier transportation. One reason for these special taxes was to discourage the use of these transportation facilities in wartime.

World War II is long since over but these taxes go on – and on. You are *still* paying them. On nearly all intercity tickets, they add an extra 10 per cent to the fare you pay. And as goods move through the processes of production and distribution, they add 3 per cent to the freight charges at every stage of the movement.

These burdensome and discriminatory taxes are still discouraging the use of our public transportation systems. And by so doing, these taxes are weakening our public carriers – essential to peacetime commerce and vital to national defense.

**ASSOCIATION OF AMERICAN RAILROADS**
WASHINGTON, D. C.

# People in the News

**ATLANTIC COAST LINE**—**James B. Sharpton,** general passenger traffic manager, Wilmington, N. C., appointed assistant vice-president (traffic).

**BALTIMORE & OHIO.**—**V. N. Dawson,** assistant purchasing agent, named purchasing agent at Baltimore, Md. **Calvin Coleman,** secretary to purchasing agent, succeeds Mr. Dawson as assistant purchasing agent, Baltimore.

**BURLINGTON.**—**L. E. Davidson,** live stock agent, Denver, appointed assistant general livestock agent there, to succeed the late **P. C. Jordan.**

**CANADIAN NATIONAL.**—**Raymond A. Clarke,** assistant superintendent, Campbellton, N.B., appointed superintendent, Edmundston division, Edmundston, N.B., succeeding **J. E. Dickison,** whose retirement was noted in Railway Age, Feb. 4, p. 45.

**A. R. Hunter,** supervisor of freight handling and freight claim prevention, Atlantic region, Moncton, N.B., retires February 28.

**CHESAPEAKE & OHIO.**—**M. L. Hankins,** right of way agent, appointed assistant general real estate agent, Huntington, W.Va., succeeding **W. L. Harrison,** who retired January 31. **J. R. Hickman** succeeds Mr. Hankins as right of way agent.

**R. J. Dullard, Jr., T. W. Lawson** and **J. L. Strang, Jr.,** appointed auditors of freight accounts, overcharge claims and station accounts, respectively, Eastern and Central regions, Richmond, Va.

**CHICAGO & NORTH WESTERN.**—**A. A. Enders** appointed general master mechanic with jurisdiction over the Motive Power and Car Departments, Chicago Terminal district, Chicago. **H. R. Spencer** appointed master mechanic, Lake Shore-Peninsula divisions, Green Bay, Wis.

**Delbert L. Perrin,** former trainmaster and locomotive engineer of the **Illinois Central,** appointed superintendent, C&NW Galena division, Chicago.

**E. B. Wilson,** formerly agent of the IC at Decatur, Ill., named superintendent of stations of the C&NW, Chicago.

**DELAWARE & HUDSON.**—**Clifford J. Connolly,** general freight agent, Albany, N.Y., appointed coal traffic manager there, succeeding **Fred W. Nyland,** who retired January 31.

Effective February 16, **G. Clayton Seaman,** Western traffic manager at Chicago, assumes jurisdiction of traffic offices at Chicago, Cleveland, Detroit, Pittsburgh, San Francisco and St. Louis. **Leonard Unger,** general agent, freight department, Cleveland, appointed Eastern traffic manager, Albany, with jurisdiction over traffic offices at Albany, Atlanta, Boston, Buffalo, New York, Philadelphia, Portland (Me.), Scranton and Winston-Salem (N.C.) **J. F. Hartman** named general agent, freight department, Cleveland, succeeding Mr. Unger.

V. N. Dawson
B&O

E. B. Wilson
C&NW

**MILWAUKEE.**—The following operating department appointments announced: **V. P. Sohn,** general superintendent of transportation, Chicago; **D. P. Valentino,** superintendent of transportation, Lines East of Mobridge, S.D., Chicago; **Q. W. Torpin,** superintendent of transportation, Lines West of Mobridge, Seattle; **J. D. Shea,** special assistant to vice-president—operation, Chicago; **R. F. Fairfield,** superintendent, Terre Haute division, Terre Haute, Ind.; **N. H. McKegney,** superintendent, Twin City Terminals, Minneapolis; **A. C. Novak,** superintendent, Trans-Missouri division, Miles City, Mont.; **B. J. McCanna,** assistant superintendent, Iowa, Minnesota and Dakota division, Sioux City, Iowa; **E. J. Lynam,** trainmaster, Hastings and Dakota division, Aberdeen, S.D. **J. H. Stewart** appointed general manager, Lines East, Chicago, to succeed **J. J. O'Toole,** who at his own request has been relieved of the responsibility of general manager but continues temporarily in a consulting capacity. **F. G. McGinn** named general manager, Lines West, Seattle; **P. J. Weiland,** assistant general manager, Lines East, Chicago; **J. A. Jakubec,** general superintendent, Milwaukee; **L. W. Palmquist,** general superintendent, Minneapolis; **R. R. Brown,** general superintendent, Chicago; **F. J. Kuklinski,** superintendent, Bensenville, Ill.; **D. O. Burke,** assistant superintendent, Chicago Terminals, Bensenville; **W. J. Peta,** trainmaster, Twin City Terminals, Minneapolis. **C. A. Nummerdor,** general superintendent of transportation, Chicago, retired January 31.

**Frank J. Casey,** senior buyer, purchasing department, appointed assistant purchasing agent, Chicago.

District general car foremen appointed: **D. D. Fisher,** Bensenville, Ill.; **G. L. Wood,** Minneapolis; **H. A. Grothe,** Milwaukee; **J. E. Palmer,** St. Paul. **J. D. O'Neill,** assistant district general car foreman, Milwaukee, named general car foreman, Chicago.

Effective February 16, **H. J. Wood,** chief clerk in the agricultural and mineral development department, appointed agricultural agent, Chicago, succeeding **Earl F. Vandrell,** resigned to accept a position with the Near East Foundation in Iran.

**Robert K. Hurlbut,** district passenger agent, Madison, Wis., appointed general agent, there, succeeding **John F. Conlin,** who retires February 28.

**SANTA FE.**—**Rodger Spahr,** general freight agent, Denver, named general freight and passenger agent there, to direct the recently combined freight and passenger traffic offices. **J. P. Warren,** formerly in charge of the Denver passenger office, transferred to Colorado Springs as division freight and passenger agent, to succeed **Hugo Pugh,** appointed general agent of the Santa Fe's off-line traffic office, Washington, D.C.

**SOUTHERN.**—**William E. Currence,** traveling passenger agent, Columbia, S.C., appointed district passenger agent, Raleigh, N.C., succeeding **Charles E. Upchurch,** transferred to Greenville, S.C.

**UNION PACIFIC.**—**P. J. Lynch,** vice-president on the executive staff, Omaha, retired February 1.

**WABASH.**—**John C. Bousfield,** chief engineer of the Wabash and the Ann Arbor, St. Louis, retired. His successor is **William J. Hedley,** assistant chief engineer, St. Louis.

## OBITUARY

**Benjamin George Stackhouse,** who retired in January 1950 as general solicitor of the **Monon** at Chicago, died February 2.

**Bradford W. Carlton,** 54, retired assistant to the president, **Chicago & North Western,** died February 6 at Los Angeles.

**Edward G. Stradling,** who retired in 1947 as superintendent of signals and communications of the **Monon** at Lafayette, Ind., died January 27 at Columbus, Ga.

# Supply Trade

**Winthrop B. Reed,** manager-industrial sales, **General Steel Castings Corporation,** has been promoted to manager-eastern sales, Eddystone, Pa. Mr. Reed will be in charge of all sales covering railroad specialties, industrial castings and iron and steel rolls at the company's Eddystone and Avonmore, Pa., locations.

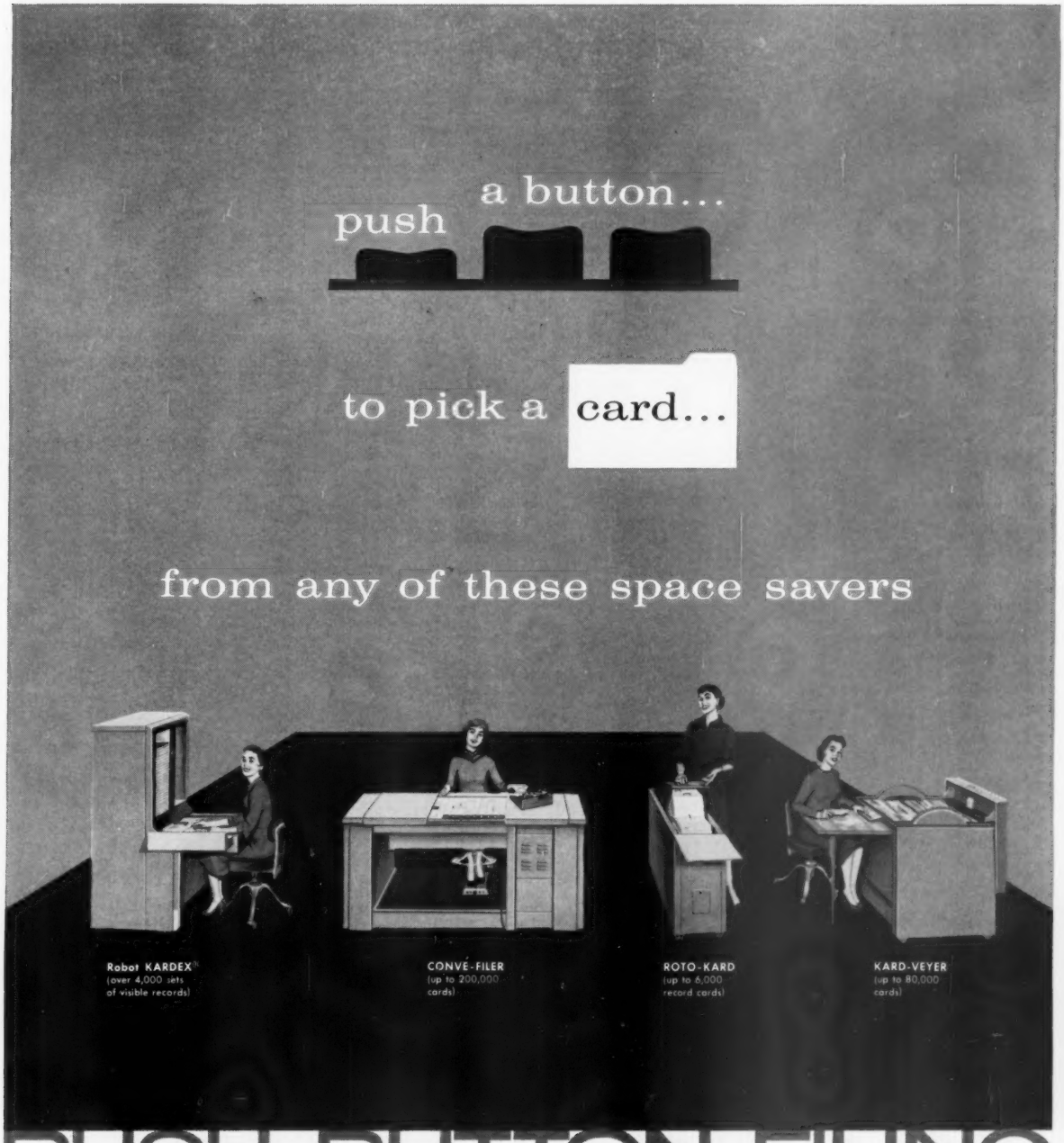
**William T. Taylor** has been elected chairman of the board of **ACF Industries, Inc.,** effective April 1. **Charles J. Hardy, Jr.,** present chairman, will continue as chairman of the executive committee and as a director. Mr. Taylor, who is now vice-president and a director of Bankers Trust Company, has been a director of ACF since 1952. He will sever his connection as an officer of the bank, but will continue on its board of directors.

**Mellor W. Stevenson,** sales manager at St. Louis for the Railway Division of **National Malleable & Steel Castings Company,** has been appointed general manager-sales, for the division at Cleveland, effective March 1. **Howard Stark,** assistant sales manager of the St. Louis office, has been named to succeed Mr. Stevenson there.

**David M. Clarke** has been appointed eastern manager of the **P & M Co.** and the **Maintenance Equipment Company,** divisions of **Poor & Co.,** with headquarters at New York. Mr. Clarke was formerly assistant eastern manager of both companies. **Edward M. Gerulat** has been appointed manager of the service of the **Maintenance Equipment Company,** with headquarters at Chicago.

Winthrop B. Reed

William T. Taylor

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*by* **Remington Rand**
DIVISION OF SPERRY RAND CORPORATION

# Freight Operating Statistics of Large Railways—Selected Items

| Region, Road and Year | | Miles of road operated | Train miles | Locomotive Miles: Principal and helper | Locomotive Miles: Light | Car Miles: Loaded (thousands) | Car Miles: Per cent loaded | Ton-miles (thousands): Gross excl.locos & tenders | Ton-miles (thousands): Net rev. and non-rev. | Road-locos. on lines: Serviceable: Unstored | Road-locos. on lines: Serviceable: Stored | Road-locos. on lines: B.O. | Road-locos. on lines: Per cent B.O. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| New Eng. Region | | | | | | | | | | | | | |
| Boston & Maine | 1956 | 1,560 | 243,434 | 250,093 | 11,509 | 9,570 | 64.7 | 647,248 | 266,490 | 70 | .. | 4 | 5.4 |
| | 1955 | 1,563 | 246,140 | 252,223 | 10,491 | 9,529 | 64.8 | 621,966 | 247,886 | 62 | .. | 1 | 1.6 |
| N. Y., N. H. & Htfd | 1956 | 1,740 | 261,781 | 261,795 | 17,764 | 11,160 | 67.4 | 709,433 | 294,254 | 94 | .. | 7 | 6.9 |
| | 1955 | 1,746 | 287,908 | 288,362 | 17,854 | 11,569 | 68.2 | 709,935 | 293,285 | 98 | .. | 8 | 7.5 |
| Great Lakes Region | | | | | | | | | | | | | |
| Delaware & Hudson | 1956 | 771 | 179,858 | 185,070 | 6,511 | 10,042 | 71.5 | 697,027 | 371,534 | 38 | .. | 3 | 7.3 |
| | 1955 | 792 | 180,580 | 185,675 | 6,235 | 9,633 | 69.6 | 658,609 | 344,405 | 35 | 1 | 3 | 7.7 |
| Del., Lack. & Western | 1956 | 962 | 279,665 | 290,649 | 23,168 | 12,134 | 68.7 | 804,436 | 354,635 | 64 | .. | 1 | 1.5 |
| | 1955 | 962 | 298,249 | 310,747 | 20,690 | 12,698 | 69.7 | 811,413 | 357,623 | 62 | .. | 1 | 1.6 |
| Erie | 1956 | 2,207 | 611,774 | 617,598 | 20,804 | 34,074 | 67.9 | 2,148,190 | 872,083 | 171 | .. | 1 | .6 |
| | 1955 | 2,224 | 607,125 | 613,227 | 21,874 | 33,179 | 68.8 | 2,048,035 | 824,205 | 164 | .. | 2 | 1.2 |
| Grand Trunk Western | 1956 | 951 | 282,742 | 287,199 | 2,230 | 8,811 | 58.9 | 650,519 | 264,750 | 60 | .. | 15 | 20.0 |
| | 1955 | 952 | 287,482 | 292,162 | 2,448 | 8,989 | 60.5 | 646,969 | 261,687 | 53 | .. | 20 | 27.4 |
| Lehigh Valley | 1956 | 1,135 | 224,957 | 228,368 | 6,821 | 10,442 | 65.5 | 733,894 | 344,863 | 33 | .. | 1 | 2.9 |
| | 1955 | 1,137 | 217,985 | 221,561 | 8,454 | 10,787 | 65.9 | 752,742 | 353,539 | 33 | .. | 1 | 2.9 |
| New York Central | 1956 | 10,565 | 2,277,259 | 2,309,894 | 119,090 | 95,613 | 59.7 | 7,057,996 | 3,164,527 | 531 | 6 | 63 | 10.5 |
| | 1955 | 10,661 | 2,639,199 | 2,680,631 | 122,296 | 105,370 | 60.9 | 7,776,727 | 3,443,545 | 577 | 2 | 81 | 12.3 |
| New York, Chic. & St. L. | 1956 | 2,155 | 746,427 | 766,579 | 7,725 | 31,584 | 64.2 | 2,269,496 | 1,025,399 | 176 | .. | 16 | 8.3 |
| | 1955 | 2,154 | 763,801 | 787,167 | 5,872 | 31,777 | 64.8 | 2,231,643 | 1,007,882 | 171 | 1 | 23 | 11.8 |
| Pitts. & Lake Erie | 1956 | 221 | 63,902 | 63,902 | .... | 2,809 | 69.2 | 234,656 | 145,755 | 13 | .. | .. | .. |
| | 1955 | 221 | 63,255 | 63,527 | 240 | 2,944 | 71.9 | 247,971 | 157,962 | 14 | .. | .. | .. |
| Wabash | 1956 | 2,381 | 532,577 | 533,777 | 6,400 | 23,606 | 64.8 | 1,575,195 | 619,775 | 111 | .. | 2 | 1.8 |
| | 1955 | 2,381 | 552,363 | 554,760 | 6,280 | 24,934 | 65.4 | 1,617,642 | 619,608 | 105 | .. | .. | .. |
| Central Eastern Region | | | | | | | | | | | | | |
| Baltimore & Ohio | 1956 | 5,910 | 1,659,519 | 1,848,203 | 185,681 | 67,301 | 62.2 | 5,369,429 | 2,622,011 | 471 | 12 | 90 | 15.7 |
| | 1955 | 6,072 | 1,694,534 | 1,884,402 | 184,113 | 65,438 | 62.9 | 5,285,247 | 2,575,894 | 442 | 3 | 94 | 17.4 |
| Bessemer & Lake Erie | 1956 | 208 | 51,350 | 54,984 | 346 | 2,520 | 61.5 | 292,606 | 189,045 | 15 | .. | .. | .. |
| | 1955 | 208 | 53,916 | 56,806 | 148 | 2,792 | 63.1 | 326,383 | 214,550 | 15 | 1 | .. | .. |
| Central RR Co. of New Jersey | 1956 | 612 | 125,682 | 126,890 | 6,490 | 4,887 | 67.0 | 369,775 | 197,433 | 63 | 1 | 3 | 4.5 |
| | 1955 | 613 | 122,336 | 123,228 | 6,192 | 4,699 | 68.3 | 343,905 | 182,472 | 67 | .. | 4 | 5.6 |
| Chicago & Eastern Ill. | 1956 | 868 | 123,130 | 123,130 | 2,647 | 5,778 | 63.6 | 452,032 | 230,750 | 27 | .. | 2 | 6.9 |
| | 1955 | 868 | 131,576 | 131,576 | 2,435 | 5,285 | 66.8 | 371,270 | 182,373 | 29 | .. | 1 | 3.3 |
| Elgin, Joliet & Eastern | 1956 | 236 | 95,236 | 96,276 | .... | 2,943 | 60.0 | 248,518 | 132,596 | 37 | .. | 3 | 7.5 |
| | 1955 | 236 | 91,180 | 91,169 | 6 | 2,789 | 62.3 | 230,432 | 125,360 | 38 | .. | 4 | 9.5 |
| Pennsylvania System | 1956 | 9,892 | 3,093,806 | 3,295,872 | 247,456 | 128,300 | 65.7 | 9,412,016 | 4,537,035 | 901 | 3 | 185 | 17.0 |
| | 1955 | 9,892 | 3,070,460 | 3,277,340 | 252,576 | 128,279 | 65.8 | 9,228,100 | 4,386,516 | 892 | 5 | 422 | 32.0 |
| Reading | 1956 | 1,303 | 362,209 | 364,337 | 14,085 | 13,974 | 64.6 | 1,145,015 | 627,953 | 161 | 12 | 14 | 7.5 |
| | 1955 | 1,303 | 353,466 | 355,452 | 14,069 | 13,804 | 64.8 | 1,095,965 | 590,696 | 159 | 2 | 33 | 17.0 |
| Western Maryland | 1956 | 846 | 179,177 | 187,750 | 11,799 | 7,229 | 62.4 | 622,968 | 354,245 | 43 | .. | .. | .. |
| | 1955 | 846 | 170,068 | 177,397 | 10,559 | 6,941 | 63.8 | 582,983 | 332,123 | 37 | .. | .. | .. |
| Pocahontas Region | | | | | | | | | | | | | |
| Chesapeake & Ohio | 1956 | 5,067 | 1,544,979 | 1,558,696 | 36,820 | 66,848 | 56.5 | 5,989,164 | 3,360,405 | 582 | 20 | 84 | 12.2 |
| | 1955 | 5,041 | 1,572,981 | 1,594,548 | 45,867 | 66,877 | 55.8 | 5,871,461 | 3,295,300 | 460 | 1 | 109 | 19.1 |
| Norfolk & Western | 1956 | 2,110 | 752,316 | 822,111 | 72,598 | 37,854 | 57.5 | 3,594,750 | 1,993,544 | 226 | 5 | 14 | 5.7 |
| | 1955 | 2,104 | 743,083 | 788,316 | 61,224 | 35,455 | 58.4 | 3,278,606 | 1,799,467 | 226 | 13 | 22 | 8.4 |
| Southern Region | | | | | | | | | | | | | |
| Atlantic Coast Line | 1956 | 5,283 | 798,077 | 798,077 | 8,948 | 24,691 | 59.0 | 1,870,244 | 845,175 | 151 | .. | 6 | 3.8 |
| | 1955 | 5,278 | 839,292 | 839,298 | 9,595 | 25,636 | 59.2 | 1,893,414 | 869,602 | 229 | .. | 7 | 3.0 |
| Central of Georgia | 1956 | 1,731 | 203,113 | 203,113 | 2,073 | 7,875 | 67.1 | 559,617 | 273,460 | 78 | .. | 5 | 6.0 |
| | 1955 | 1,731 | 200,318 | 200,344 | 1,866 | 8,092 | 67.4 | 561,917 | 270,606 | 74 | .. | 3 | 3.9 |
| Gulf, Mobile & Ohio | 1956 | 2,717 | 272,462 | 272,462 | 148 | 14,913 | 66.5 | 1,042,329 | 492,613 | 87 | .. | 4 | 4.4 |
| | 1955 | 2,717 | 278,503 | 278,503 | 357 | 15,721 | 68.0 | 1,081,435 | 509,433 | 84 | .. | 7 | 7.7 |
| Illinois Central | 1956 | 6,503 | 1,245,243 | 1,246,686 | 35,205 | 49,741 | 60.3 | 3,765,564 | 1,750,484 | 323 | 6 | 66 | 16.7 |
| | 1955 | 6,531 | 1,318,312 | 1,319,460 | 39,944 | 52,841 | 61.8 | 3,940,091 | 1,847,780 | 335 | 9 | 152 | 30.6 |
| Louisville & Nashville | 1956 | 4,714 | 893,081 | 894,825 | 14,811 | 32,901 | 60.8 | 2,544,274 | 1,304,705 | 165 | 10 | 29 | 14.2 |
| | 1955 | 4,714 | 928,062 | 936,958 | 18,968 | 33,739 | 60.7 | 2,590,011 | 1,319,943 | 184 | 5 | 30 | 13.7 |
| Nash., Chatt. & St. Louis | 1956 | 1,043 | 160,971 | 164,023 | 3,487 | 5,313 | 68.2 | 360,126 | 171,156 | 49 | .. | 4 | 7.5 |
| | 1955 | 1,043 | 173,498 | 177,539 | 3,601 | 5,652 | 67.9 | 381,698 | 180,163 | 49 | .. | 4 | 7.5 |
| Seaboard Air Line | 1956 | 4,051 | 640,173 | 640,173 | 798 | 24,738 | 63.1 | 1,798,125 | 840,777 | 148 | .. | 8 | 5.1 |
| | 1955 | 4,053 | 620,622 | 620,622 | 2,024 | 25,123 | 65.0 | 1,773,122 | 835,120 | 146 | .. | 10 | 6.4 |
| Southern | 1956 | 6,259 | 871,864 | 871,924 | 9,966 | 42,119 | 66.9 | 2,820,927 | 1,321,045 | 190 | 1 | 8 | 3.8 |
| | 1955 | 6,264 | 918,000 | 918,060 | 12,227 | 43,999 | 68.5 | 2,844,767 | 1,313,179 | 281 | .. | 5 | 1.7 |
| Northwestern Region | | | | | | | | | | | | | |
| Chicago & North Western | 1956 | 7,760 | 676,675 | 677,889 | 7,307 | 27,651 | 62.9 | 1,997,650 | 843,356 | 150 | .. | 12 | 7.4 |
| | 1955 | 7,810 | 786,119 | 788,843 | 10,462 | 32,091 | 63.2 | 2,236,961 | 962,730 | 152 | 11 | 35 | 17.7 |
| Chicago Great Western | 1956 | 1,437 | 131,360 | 131,360 | 198 | 7,825 | 69.0 | 529,477 | 246,490 | 30 | .. | 2 | 6.3 |
| | 1955 | 1,437 | 132,074 | 132,074 | 223 | 8,002 | 70.0 | 523,188 | 237,567 | 32 | .. | 1 | 3.0 |
| Chic., Milw., St. P. & Pac. | 1956 | 10,621 | 968,167 | 982,592 | 20,283 | 42,403 | 61.9 | 2,946,669 | 1,289,433 | 291 | 1 | 11 | 3.6 |
| | 1955 | 10,633 | 1,060,127 | 1,076,802 | 22,216 | 44,676 | 64.0 | 3,047,945 | 1,334,862 | 291 | 31 | 24 | 6.9 |
| Chic., St. P., Minn. & Omaha | 1956 | 1,606 | 148,738 | 148,738 | 2,819 | 5,027 | 64.4 | 355,962 | 157,345 | 34 | 4 | 1 | 2.6 |
| | 1955 | 1,606 | 162,011 | 163,442 | 4,389 | 5,393 | 63.6 | 384,708 | 167,417 | 54 | .. | 15 | 21.7 |
| Duluth, Missabe & Iron Range | 1956 | 569 | 129,114 | 130,131 | 1,596 | 5,642 | 49.7 | 570,200 | 322,302 | 59 | .. | 7 | 10.6 |
| | 1955 | 569 | 110,725 | 110,838 | 728 | 4,640 | 51.1 | 432,078 | 239,975 | 60 | .. | 11 | 15.5 |
| Great Northern | 1956 | 8,273 | 1,167,883 | 1,171,835 | 31,868 | 45,888 | 65.3 | 3,357,855 | 1,612,323 | 261 | 47 | 26 | 7.8 |
| | 1955 | 8,272 | 1,232,341 | 1,239,319 | 41,793 | 45,612 | 64.4 | 3,361,096 | 1,596,395 | 278 | 55 | 34 | 9.3 |
| Minneap., St. P. & S. Ste. M. | 1956 | 4,171 | 414,757 | 416,419 | 1,662 | 14,424 | 63.9 | 985,266 | 440,160 | 82 | 2 | 6 | 6.7 |
| | 1955 | 4,171 | 392,646 | 394,458 | 1,812 | 16,514 | 66.1 | 1,146,388 | 524,170 | 80 | 10 | 5 | 5.3 |
| Northern Pacific | 1956 | 6,569 | 803,253 | 817,545 | 23,400 | 33,578 | 66.1 | 2,305,101 | 1,031,045 | 226 | 61 | 23 | 7.4 |
| | 1955 | 6,570 | 836,352 | 850,646 | 23,347 | 33,225 | 70.2 | 2,218,908 | 1,027,321 | 255 | 31 | 69 | 19.4 |
| Central Western Region | | | | | | | | | | | | | |
| Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.) | 1956 | 13,153 | 2,462,866 | 2,563,582 | 55,053 | 115,087 | 63.5 | 7,840,355 | 2,931,877 | 553 | 48 | 65 | 9.8 |
| | 1955 | 13,097 | 2,611,503 | 2,734,544 | 81,795 | 118,178 | 62.4 | 8,102,594 | 2,989,495 | 535 | 84 | 29 | 4.5 |
| Chic., Burl. & Quincy | 1956 | 8,765 | 1,152,079 | 1,148,305 | 30,954 | 50,250 | 63.2 | 3,441,108 | 1,451,229 | 183 | 28 | 25 | 10.6 |
| | 1955 | 8,773 | 1,186,266 | 1,180,852 | 37,112 | 50,299 | 66.6 | 3,302,104 | 1,406,067 | 227 | 24 | 37 | 12.8 |
| Chic., Rock I. & Pac. | 1956 | 7,580 | 950,560 | 951,412 | 1,453 | 37,089 | 61.1 | 2,659,895 | 1,089,359 | 171 | .. | 4 | 2.3 |
| | 1955 | 7,903 | 861,229 | 862,322 | 2,046 | 34,864 | 62.1 | 2,490,557 | 1,048,352 | 169 | 1 | 5 | 2.9 |
| Denver & R. G. Wn. | 1956 | 2,155 | 321,383 | 347,449 | 33,224 | 15,729 | 72.1 | 1,069,707 | 521,670 | 78 | 7 | 4 | 4.5 |
| | 1955 | 2,165 | 331,553 | 355,079 | 37,571 | 15,497 | 67.6 | 1,084,310 | 510,317 | 70 | 10 | 24 | 23.1 |
| Southern Pacific | 1956 | 8,038 | 2,097,533 | 2,189,264 | 128,383 | 95,443 | 63.1 | 6,609,676 | 2,707,523 | 645 | 94 | 72 | 8.9 |
| | 1955 | 8,065 | 2,274,521 | 2,357,629 | 173,535 | 97,950 | 62.5 | 6,805,520 | 2,764,795 | 623 | 34 | 105 | 13.8 |
| Union Pacific | 1956 | 9,787 | 2,502,316 | 2,562,627 | 102,028 | 109,931 | 62.3 | 7,593,555 | 3,106,010 | 466 | 17 | 89 | 15.6 |
| | 1955 | 9,809 | 2,621,052 | 2,674,508 | 115,190 | 113,408 | 65.0 | 7,590,026 | 3,108,772 | 477 | 51 | 135 | 20.4 |
| Western Pacific | 1956 | 1,190 | 254,723 | 275,557 | 13,064 | 11,579 | 69.4 | 755,772 | 334,800 | 47 | .. | .. | .. |
| | 1955 | 1,190 | 277,408 | 292,668 | 15,314 | 11,723 | 65.9 | 783,348 | 334,646 | 45 | .. | 1 | 2.2 |
| Southwestern Region | | | | | | | | | | | | | |
| Kansas City Southern | 1956 | 886 | 136,526 | 136,531 | 262 | 8,003 | 65.9 | 579,336 | 260,167 | 24 | .. | 1 | 4.0 |
| | 1955 | 886 | 155,628 | 155,898 | 229 | 8,921 | 68.2 | 637,028 | 292,613 | 27 | .. | 3 | 10.0 |
| Louisiana & Arkansas | 1956 | 746 | 94,340 | 94,340 | 52 | 4,231 | 63.5 | 331,990 | 155,809 | 18 | .. | .. | .. |
| | 1955 | 753 | 107,003 | 107,003 | 9 | 4,560 | 65.9 | 350,167 | 166,721 | 19 | .. | .. | .. |
| Mo.-Kans.-Texas Lines | 1956 | 3,222 | 354,416 | 354,416 | 3,804 | 14,815 | 62.8 | 986,824 | 398,943 | 80 | .. | .. | .. |
| | 1955 | 3,230 | 335,664 | 335,664 | 3,423 | 14,820 | 66.1 | 964,710 | 418,724 | 87 | .. | .. | .. |
| Missouri Pacific | 1956 | 9,653 | 1,224,450 | 1,224,450 | 10,717 | 54,200 | 63.4 | 3,847,006 | 1,708,431 | 339 | .. | 48 | 12.4 |
| | 1955 | 9,702 | 1,303,526 | 1,303,526 | 10,875 | 55,395 | 63.6 | 3,924,691 | 1,721,863 | 338 | 29 | 44 | 10.7 |
| Texas & Pacific | 1956 | 1,822 | 285,623 | 285,623 | 4,167 | 14,568 | 64.0 | 1,051,053 | 422,760 | 58 | .. | 1 | 1.7 |
| | 1955 | 1,822 | 334,302 | 334,302 | 3,206 | 16,400 | 64.6 | 1,150,287 | 451,582 | 62 | .. | 1 | 1.6 |
| St. Louis-San Francisco | 1956 | 4,573 | 649,362 | 649,362 | 6,163 | 25,196 | 66.0 | 1,712,045 | 778,047 | 104 | .. | 12 | 10.3 |
| | 1955 | 4,573 | 611,607 | 611,607 | 5,863 | 25,292 | 67.4 | 1,665,719 | 746,718 | 111 | .. | 11 | 9.0 |
| St. Louis Southw. Lines | 1956 | 1,554 | 334,609 | 334,653 | 1,598 | 15,064 | 70.5 | 953,417 | 426,191 | 56 | .. | 1 | 1.8 |
| | 1955 | 1,554 | 325,827 | 325,881 | 1,549 | 15,561 | 72.7 | 961,029 | 429,593 | 55 | .. | 10 | 15.4 |
| Texas & New Orleans | 1956 | 4,285 | 667,005 | 667,005 | 1,579 | 28,055 | 64.2 | 1,963,826 | 864,429 | 153 | .. | 4 | 2.5 |
| | 1955 | 4,303 | 730,926 | 730,926 | 4,522 | 28,386 | 63.1 | 1,999,399 | 863,907 | 139 | .. | 3 | 2.1 |

# For the month of November 1956 Compared with November 1955

| Region, Road and Year | | Freight cars on line: Home | Foreign | Total | Per Cent B.O. | G.t.m.per train-hr. excl.locos and tenders | G.t.m.per train-mi. excl.locos and tenders | Net ton-mi. per train-mile | Net ton-mi. per l'd car-mile | Net ton-mi. per car-day | Car-miles per car-day | Net daily ton-mi. per road-mi. | Train-miles per train-hour | Miles per loco. per day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| New Engl. Region | Boston & Maine | 1956 | 1,321 | 9,562 | 10,883 | 1.1 | 40,567 | 2,670 | 1,099 | 27.8 | 816 | 45.3 | 5,694 | 15.3 | 137.9 |
| | | 1955 | 1,758 | 8,996 | 10,754 | 5.1 | 38,617 | 2,531 | 1,009 | 26.0 | 719 | 42.7 | 5,287 | 15.3 | 150.3 |
| | N. Y., N. H. & Htfd | 1956 | 2,241 | 14,372 | 16,613 | 2.7 | 41,968 | 2,710 | 1,124 | 26.4 | 581 | 32.7 | 5,637 | 15.5 | 115.3 |
| | | 1955 | 1,782 | 19,033 | 20,815 | 2.0 | 37,783 | 2,466 | 1,019 | 25.4 | 433 | 25.1 | 5,599 | 15.3 | 121.1 |
| Great Lakes Region | Delaware & Hudson | 1956 | 1,558 | 7,374 | 8,932 | 6.5 | 67,359 | 3,893 | 2,075 | 37.0 | 1,433 | 54.2 | 16,063 | 17.4 | 174.5 |
| | | 1955 | 2,469 | 5,419 | 7,888 | 4.9 | 65,403 | 3,663 | 1,915 | 35.8 | 1,345 | 54.1 | 14,495 | 17.9 | 176.8 |
| | Del., Lack. & Western | 1956 | 3,503 | 11,650 | 15,153 | 2.7 | 52,311 | 2,932 | 1,293 | 29.0 | 791 | 39.7 | 12,288 | 18.2 | 180.6 |
| | | 1955 | 3,461 | 12,919 | 16,380 | 2.9 | 48,169 | 2,771 | 1,221 | 28.2 | 736 | 37.5 | 12,392 | 17.7 | 193.9 |
| | Erie | 1956 | 5,617 | 21,779 | 27,396 | 2.3 | 70,567 | 3,545 | 1,439 | 25.6 | 1,053 | 60.6 | 13,171 | 20.1 | 137.4 |
| | | 1955 | 7,111 | 19,304 | 26,415 | 3.8 | 64,396 | 3,401 | 1,369 | 24.8 | 990 | 58.0 | 12,353 | 19.1 | 141.7 |
| | Grand Trunk Western | 1956 | 4,026 | 9,494 | 13,520 | 6.8 | 50,249 | 2,323 | 945 | 30.0 | 649 | 36.6 | 9,280 | 21.8 | 141.6 |
| | | 1955 | 3,700 | 10,235 | 13,935 | 7.5 | 47,380 | 2,273 | 920 | 29.1 | 628 | 35.7 | 9,163 | 21.1 | 146.7 |
| | Lehigh Valley | 1956 | 4,439 | 9,840 | 14,279 | 5.0 | 71,217 | 3,301 | 1,551 | 33.0 | 795 | 36.7 | 10,128 | 21.8 | 249.7 |
| | | 1955 | 6,882 | 9,707 | 16,589 | 3.9 | 70,893 | 3,521 | 1,654 | 32.8 | 708 | 32.7 | 10,365 | 20.5 | 237.6 |
| | New York Central | 1956 | 44,553 | 102,661 | 147,214 | 2.5 | 50,401 | 3,161 | 1,417 | 33.1 | 721 | 36.5 | 9,984 | 16.3 | 152.8 |
| | | 1955 | 47,065 | 104,253 | 151,318 | 3.7 | 49,952 | 2,992 | 1,325 | 32.7 | 755 | 38.0 | 10,767 | 17.0 | 153.6 |
| | New York, Chic. & St. L. | 1956 | 6,995 | 19,587 | 26,582 | 4.9 | 50,963 | 3,118 | 1,409 | 32.5 | 1,268 | 60.9 | 15,861 | 16.8 | 144.5 |
| | | 1955 | 6,564 | 18,896 | 25,460 | 5.5 | 50,373 | 3,001 | 1,355 | 31.7 | 1,300 | 63.3 | 15,597 | 17.2 | 148.7 |
| | Pitts. & Lake Erie | 1956 | 2,101 | 9,376 | 11,477 | 4.2 | 54,852 | 3,679 | 2,285 | 51.9 | 412 | 11.5 | 21,984 | 14.9 | 166.9 |
| | | 1955 | 1,925 | 10,182 | 12,107 | 2.3 | 59,824 | 3,937 | 2,508 | 53.7 | 443 | 11.5 | 23,825 | 15.3 | 165.8 |
| | Wabash | 1956 | 8,588 | 11,556 | 20,144 | 4.5 | 63,827 | 2,968 | 1,168 | 26.3 | 1,033 | 60.7 | 8,677 | 21.6 | 168.5 |
| | | 1955 | 8,775 | 10,639 | 19,414 | 5.0 | 62,995 | 2,943 | 1,127 | 24.8 | 1,060 | 65.2 | 8,674 | 21.5 | 189.6 |
| Central Eastern Region | Baltimore & Ohio | 1956 | 43,698 | 53,133 | 96,831 | 4.1 | 50,370 | 3,303 | 1,613 | 39.0 | 911 | 37.6 | 14,789 | 15.6 | 123.3 |
| | | 1955 | 43,305 | 47,160 | 90,465 | 7.6 | 48,790 | 3,172 | 1,546 | 39.4 | 987 | 39.8 | 14,141 | 15.6 | 133.7 |
| | Bessemer & Lake Erie | 1956 | 4,159 | 1,167 | 5,326 | 6.1 | 90,815 | 5,985 | 3,867 | 75.0 | 1,777 | 25.5 | 30,296 | 15.9 | 133.6 |
| | | 1955 | 2,597 | 1,152 | 3,749 | 17.5 | 98,724 | 6,301 | 4,142 | 76.8 | 1,830 | 37.7 | 34,383 | 16.3 | 133.2 |
| | Central RR Co. of New Jersey | 1956 | 1,863 | 10,715 | 12,578 | 6.9 | 43,406 | 3,064 | 1,636 | 40.4 | 524 | 19.4 | 10,753 | 14.8 | 91.0 |
| | | 1955 | 2,304 | 10,243 | 12,547 | 7.9 | 41,112 | 2,912 | 1,545 | 38.8 | 476 | 18.0 | 9,922 | 14.6 | 88.3 |
| | Chicago & Eastern Ill. | 1956 | 2,228 | 3,779 | 6,007 | 10.3 | 63,407 | 3,692 | 1,885 | 39.9 | 1,264 | 49.8 | 8,861 | 17.3 | 147.0 |
| | | 1955 | 2,587 | 3,635 | 6,222 | 7.1 | 49,234 | 2,835 | 1,392 | 34.5 | 983 | 42.6 | 7,004 | 17.4 | 156.4 |
| | Elgin, Joliet & Eastern | 1956 | 6,249 | 11,386 | 17,635 | 5.1 | 20,076 | 2,736 | 1,460 | 45.1 | 223 | 8.2 | 18,728 | 7.7 | 105.5 |
| | | 1955 | 6,800 | 9,912 | 16,712 | 4.4 | 20,399 | 2,670 | 1,452 | 44.9 | 253 | 9.0 | 17,706 | 8.1 | 100.4 |
| | Pennsylvania System | 1956 | 104,699 | 91,300 | 195,999 | 6.5 | 51,629 | 3,136 | 1,512 | 35.4 | 774 | 33.3 | 15,289 | 17.0 | 113.6 |
| | | 1955 | 94,585 | 100,195 | 194,780 | 8.2 | 51,631 | 3,108 | 1,477 | 34.2 | 749 | 33.3 | 14,781 | 17.2 | 99.0 |
| | Reading | 1956 | 9,145 | 24,050 | 33,195 | 2.9 | 50,835 | 3,161 | 1,734 | 44.9 | 633 | 21.8 | 16,064 | 16.1 | 79.2 |
| | | 1955 | 10,863 | 21,480 | 32,343 | 4.1 | 48,071 | 3,101 | 1,672 | 42.8 | 611 | 22.0 | 15,111 | 15.5 | 75.6 |
| | Western Maryland | 1956 | 4,632 | 6,038 | 10,670 | 1.8 | 50,296 | 3,571 | 2,030 | 49.0 | 1,242 | 40.6 | 13,958 | 14.5 | 165.2 |
| | | 1955 | 4,836 | 4,774 | 9,610 | 2.9 | 49,364 | 3,509 | 1,999 | 47.8 | 1,178 | 38.6 | 13,086 | 14.4 | 186.4 |
| Pocahontas Region | Chesapeake & Ohio | 1956 | 49,671 | 31,864 | 81,535 | .7 | 73,878 | 3,900 | 2,188 | 50.3 | 1,356 | 47.7 | 22,106 | 19.1 | 85.6 |
| | | 1955 | 46,442 | 35,007 | 81,449 | 1.2 | 69,467 | 3,760 | 2,110 | 49.3 | 1,331 | 48.4 | 21,790 | 18.6 | 105.3 |
| | Norfolk & Western | 1956 | 34,503 | 10,544 | 45,047 | .8 | 82,104 | 4,914 | 2,725 | 52.7 | 1,511 | 49.9 | 31,494 | 17.2 | 133.2 |
| | | 1955 | 31,725 | 9,834 | 41,559 | 1.6 | 75,662 | 4,526 | 2,484 | 50.8 | 1,473 | 49.7 | 28,509 | 17.1 | 117.8 |
| Southern Region | Atlantic Coast Line | 1956 | 17,469 | 17,364 | 34,833 | 4.6 | 44,458 | 2,350 | 1,062 | 34.2 | 801 | 39.7 | 5,333 | 19.0 | 184.0 |
| | | 1955 | 17,649 | 18,128 | 35,777 | 4.3 | 41,460 | 2,271 | 1,043 | 33.9 | 826 | 41.2 | 5,492 | 18.4 | 131.3 |
| | Central of Georgia | 1956 | 2,264 | 6,501 | 8,765 | 2.5 | 48,700 | 2,759 | 1,348 | 34.7 | 997 | 42.8 | 5,266 | 17.7 | 91.9 |
| | | 1955 | 2,405 | 6,711 | 9,116 | 3.9 | 47,568 | 2,811 | 1,354 | 33.4 | 948 | 42.1 | 5,211 | 17.0 | 94.6 |
| | Gulf, Mobile & Ohio | 1956 | 4,918 | 10,468 | 15,386 | 6.7 | 73,804 | 3,829 | 1,810 | 33.0 | 1,036 | 47.1 | 6,044 | 19.3 | 108.7 |
| | | 1955 | 5,175 | 11,439 | 16,614 | 3.0 | 73,011 | 3,888 | 1,832 | 32.4 | 1,016 | 46.1 | 6,250 | 18.8 | 110.7 |
| | Illinois Central | 1956 | 23,153 | 26,438 | 49,591 | 1.7 | 51,524 | 3,061 | 1,423 | 35.2 | 1,149 | 54.2 | 8,973 | 17.0 | 117.3 |
| | | 1955 | 23,289 | 29,950 | 53,239 | 1.9 | 47,984 | 3,033 | 1,423 | 35.0 | 1,112 | 51.5 | 9,431 | 16.1 | 98.7 |
| | Louisville & Nashville | 1956 | 25,558 | 16,406 | 41,964 | 3.7 | 51,440 | 2,855 | 1,464 | 39.7 | 1,059 | 43.9 | 9,226 | 18.1 | 162.2 |
| | | 1955 | 27,307 | 14,055 | 41,362 | 3.3 | 47,137 | 2,798 | 1,426 | 39.1 | 1,077 | 45.4 | 9,333 | 16.9 | 161.7 |
| | Nash., Chatt. & St. Louis | 1956 | 2,855 | 4,504 | 7,359 | 4.2 | 43,652 | 2,239 | 1,064 | 32.2 | 767 | 34.9 | 5,470 | 19.5 | 116.7 |
| | | 1955 | 3,226 | 3,188 | 6,414 | 4.5 | 41,030 | 2,201 | 1,039 | 31.9 | 937 | 43.3 | 5,758 | 18.6 | 126.2 |
| | Seaboard Air Line | 1956 | 11,957 | 18,207 | 30,164 | 1.9 | 51,592 | 2,856 | 1,335 | 34.0 | 964 | 44.9 | 6,918 | 18.4 | 165.6 |
| | | 1955 | 11,527 | 16,184 | 27,711 | 2.6 | 52,556 | 2,906 | 1,369 | 33.2 | 1,015 | 46.9 | 6,868 | 18.4 | 165.3 |
| | Southern | 1956 | 14,843 | 27,235 | 42,078 | 3.8 | 55,099 | 3,245 | 1,520 | 31.4 | 1,074 | 51.2 | 7,035 | 17.0 | 153.9 |
| | | 1955 | 14,004 | 27,705 | 41,709 | 3.5 | 52,898 | 3,108 | 1,435 | 29.8 | 1,046 | 51.2 | 6,988 | 17.1 | 118.0 |
| Northwestern Region | Chicago & North Western | 1956 | 15,608 | 27,113 | 42,721 | 6.8 | 50,686 | 3,013 | 1,272 | 30.5 | 623 | 32.5 | 3,623 | 17.2 | 155.2 |
| | | 1955 | 15,738 | 30,112 | 45,850 | 4.7 | 52,072 | 2,903 | 1,249 | 30.0 | 675 | 35.6 | 4,119 | 18.3 | 145.8 |
| | Chicago Great Western | 1956 | 1,612 | 4,607 | 6,219 | 3.1 | 77,082 | 4,036 | 1,879 | 31.5 | 1,302 | 59.9 | 5,718 | 19.1 | 143.3 |
| | | 1955 | 1,458 | 4,077 | 5,535 | 3.4 | 76,067 | 3,966 | 1,801 | 29.7 | 1,405 | 67.6 | 5,511 | 19.2 | 139.2 |
| | Chic., Milw., St. P. & Pac. | 1956 | 27,931 | 32,381 | 60,312 | 6.0 | 58,940 | 3,053 | 1,336 | 30.4 | 715 | 38.0 | 4,047 | 19.4 | 117.6 |
| | | 1955 | 27,388 | 34,094 | 61,482 | 5.4 | 54,621 | 2,885 | 1,264 | 29.9 | 723 | 37.8 | 4,185 | 19.0 | 113.0 |
| | Chic., St. P., Minn. & Omaha | 1956 | 1,183 | 7,185 | 8,368 | 2.0 | 38,079 | 2,427 | 1,073 | 31.3 | 581 | 28.8 | 3,266 | 15.9 | 138.6 |
| | | 1955 | 1,185 | 8,040 | 9,225 | 2.6 | 35,536 | 2,413 | 1,050 | 31.0 | 556 | 28.2 | 3,475 | 15.0 | 87.7 |
| | Duluth, Missabe & Iron Range | 1956 | 14,238 | 874 | 15,112 | 3.3 | 78,964 | 4,687 | 2,649 | 57.1 | 716 | 25.3 | 18,881 | 17.9 | 75.2 |
| | | 1955 | 14,264 | 881 | 15,145 | 2.2 | 70,348 | 4,125 | 2,291 | 51.7 | 531 | 20.1 | 14,058 | 18.0 | 61.8 |
| | Great Northern | 1956 | 21,161 | 23,199 | 44,360 | 2.3 | 57,149 | 2,916 | 1,400 | 35.1 | 1,240 | 54.0 | 6,496 | 19.9 | 128.3 |
| | | 1955 | 20,377 | 26,041 | 46,418 | 2.1 | 51,813 | 2,769 | 1,315 | 35.0 | 1,198 | 53.1 | 6,433 | 19.0 | 124.4 |
| | Minneap., St. P. & S. Ste. M. | 1956 | 6,134 | 8,680 | 14,814 | 4.0 | 50,164 | 2,385 | 1,065 | 30.5 | 962 | 49.4 | 3,518 | 21.1 | 172.1 |
| | | 1955 | 6,134 | 8,680 | 14,814 | 4.2 | 62,620 | 2,948 | 1,348 | 31.7 | 1,158 | 55.2 | 4,189 | 21.4 | 156.6 |
| | Northern Pacific | 1956 | 17,308 | 18,335 | 35,643 | 4.5 | 57,221 | 2,883 | 1,290 | 30.7 | 995 | 49.0 | 5,232 | 19.9 | 97.8 |
| | | 1955 | 17,281 | 18,062 | 35,343 | 4.7 | 49,983 | 2,664 | 1,234 | 30.9 | 990 | 45.6 | 5,212 | 18.8 | 88.8 |
| Central Western Region | Atch., Top. & S. Fe (incl. G. C. & S. F. and P. & S. F.) | 1956 | 52,508 | 38,340 | 90,848 | 4.6 | 74,842 | 3,194 | 1,194 | 25.5 | 1,080 | 66.8 | 7,430 | 23.5 | 139.3 |
| | | 1955 | 49,406 | 38,297 | 87,703 | 3.1 | 71,246 | 3,113 | 1,149 | 25.3 | 1,159 | 73.4 | 7,609 | 23.0 | 155.4 |
| | Chic., Burl. & Quincy | 1956 | 18,928 | 24,287 | 43,215 | 2.9 | 62,832 | 2,995 | 1,263 | 28.9 | 1,092 | 59.8 | 5,519 | 21.0 | 173.8 |
| | | 1955 | 19,171 | 25,228 | 44,399 | 3.6 | 58,263 | 2,789 | 1,187 | 28.0 | 1,057 | 56.8 | 5,342 | 20.9 | 151.6 |
| | Chic., Rock I. & Pac. | 1956 | 11,327 | 22,425 | 33,752 | 5.2 | 57,801 | 2,807 | 1,150 | 29.4 | 1,080 | 60.2 | 4,790 | 20.7 | 190.1 |
| | | 1955 | 11,155 | 21,610 | 32,765 | 5.1 | 58,253 | 2,903 | 1,222 | 30.1 | 1,065 | 57.0 | 4,422 | 20.1 | 172.4 |
| | Denver & R. G. Wn. | 1956 | 7,127 | 7,909 | 15,036 | 2.8 | 59,894 | 3,337 | 1,627 | 33.2 | 1,144 | 47.8 | 8,069 | 18.0 | 149.1 |
| | | 1955 | 7,719 | 8,369 | 16,088 | 2.8 | 58,875 | 3,278 | 1,543 | 32.9 | 1,067 | 48.0 | 7,857 | 18.0 | 134.7 |
| | Southern Pacific | 1956 | 28,965 | 49,196 | 78,161 | 1.5 | 62,260 | 3,189 | 1,306 | 28.4 | 1,150 | 64.3 | 11,228 | 19.8 | 103.4 |
| | | 1955 | 30,019 | 54,454 | 84,473 | 1.5 | 57,896 | 3,020 | 1,227 | 28.2 | 1,132 | 64.2 | 11,427 | 19.3 | 119.5 |
| | Union Pacific | 1956 | 28,833 | 36,155 | 64,988 | 2.1 | 75,712 | 3,063 | 1,253 | 28.3 | 1,590 | 90.3 | 10,579 | 24.9 | 161.2 |
| | | 1955 | 27,119 | 38,187 | 65,306 | 1.7 | 73,213 | 2,924 | 1,198 | 27.4 | 1,583 | 88.8 | 10,564 | 25.3 | 146.9 |
| | Western Pacific | 1956 | 2,203 | 4,715 | 6,918 | 1.6 | 76,426 | 2,988 | 1,324 | 28.9 | 1,531 | 76.3 | 9,378 | 25.8 | 208.2 |
| | | 1955 | 2,073 | 5,156 | 7,229 | 1.2 | 70,808 | 2,848 | 1,217 | 28.5 | 1,592 | 84.6 | 9,374 | 25.1 | 226.7 |
| Southwestern Region | Kansas City Southern | 1956 | 1,667 | 5,167 | 6,834 | 4.1 | 88,408 | 4,261 | 1,914 | 32.5 | 1,237 | 57.7 | 9,788 | 20.8 | 214.1 |
| | | 1955 | 913 | 6,079 | 6,992 | 1.6 | 85,381 | 4,129 | 1,897 | 32.8 | 1,352 | 60.4 | 11,009 | 20.9 | 204.5 |
| | Louisiana & Arkansas | 1956 | 1,564 | 3,550 | 5,114 | 6.1 | 70,681 | 3,525 | 1,654 | 36.8 | 1,007 | 43.1 | 6,962 | 20.1 | 214.5 |
| | | 1955 | 1,146 | 3,956 | 5,102 | 3.7 | 64,966 | 3,275 | 1,559 | 36.6 | 1,124 | 46.7 | 7,380 | 19.9 | 238.3 |
| | Mo.-Kans.-Texas Lines | 1956 | 3,959 | 6,994 | 10,953 | 5.5 | 61,214 | 2,793 | 1,129 | 26.9 | 1,215 | 71.9 | 4,127 | 22.0 | 153.9 |
| | | 1955 | 3,667 | 7,018 | 10,685 | 5.2 | 58,432 | 2,881 | 1,251 | 28.3 | 1,264 | 67.7 | 4,321 | 20.3 | 140.3 |
| | Missouri Pacific | 1956 | 17,168 | 28,823 | 45,991 | 1.5 | 65,470 | 3,155 | 1,401 | 31.5 | 1,221 | 61.1 | 5,899 | 20.8 | 116.5 |
| | | 1955 | 21,498 | 30,626 | 52,124 | 2.6 | 65,035 | 3,037 | 1,332 | 31.1 | 1,106 | 55.9 | 5,916 | 21.6 | 116.0 |
| | Texas & Pacific | 1956 | 3,037 | 6,449 | 9,486 | 3.1 | 74,845 | 3,694 | 1,486 | 29.0 | 1,479 | 79.7 | 7,734 | 20.3 | 176.3 |
| | | 1955 | 2,562 | 7,549 | 10,111 | 2.2 | 70,105 | 3,452 | 1,355 | 27.5 | 1,504 | 84.6 | 8,262 | 20.4 | 195.6 |
| | St. Louis-San Francisco | 1956 | 11,467 | 12,527 | 23,994 | 3.5 | 54,565 | 2,651 | 1,205 | 30.9 | 1,067 | 52.3 | 5,671 | 20.7 | 207.8 |
| | | 1955 | 9,784 | 12,054 | 21,838 | 3.1 | 54,013 | 2,732 | 1,225 | 29.5 | 1,130 | 56.8 | 5,443 | 19.8 | 186.2 |
| | St. Louis Southw. Lines | 1956 | 1,896 | 4,697 | 6,593 | 1.7 | 61,878 | 2,855 | 1,276 | 28.3 | 2,092 | 105.0 | 9,142 | 21.7 | 210.2 |
| | | 1955 | 1,848 | 4,924 | 6,772 | 1.3 | 64,542 | 2,953 | 1,320 | 27.6 | 2,015 | 100.5 | 9,215 | 21.9 | 180.3 |
| | Texas & New Orleans | 1956 | 5,202 | 16,901 | 22,103 | 2.1 | 60,448 | 2,960 | 1,303 | 30.8 | 1,299 | 65.7 | 6,724 | 20.5 | 150.4 |
| | | 1955 | 5,322 | 15,957 | 21,279 | 1.4 | 57,298 | 2,753 | 1,189 | 30.4 | 1,360 | 70.8 | 6,692 | 20.9 | 183.4 |

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a RAILWAY AGE Workbook Page

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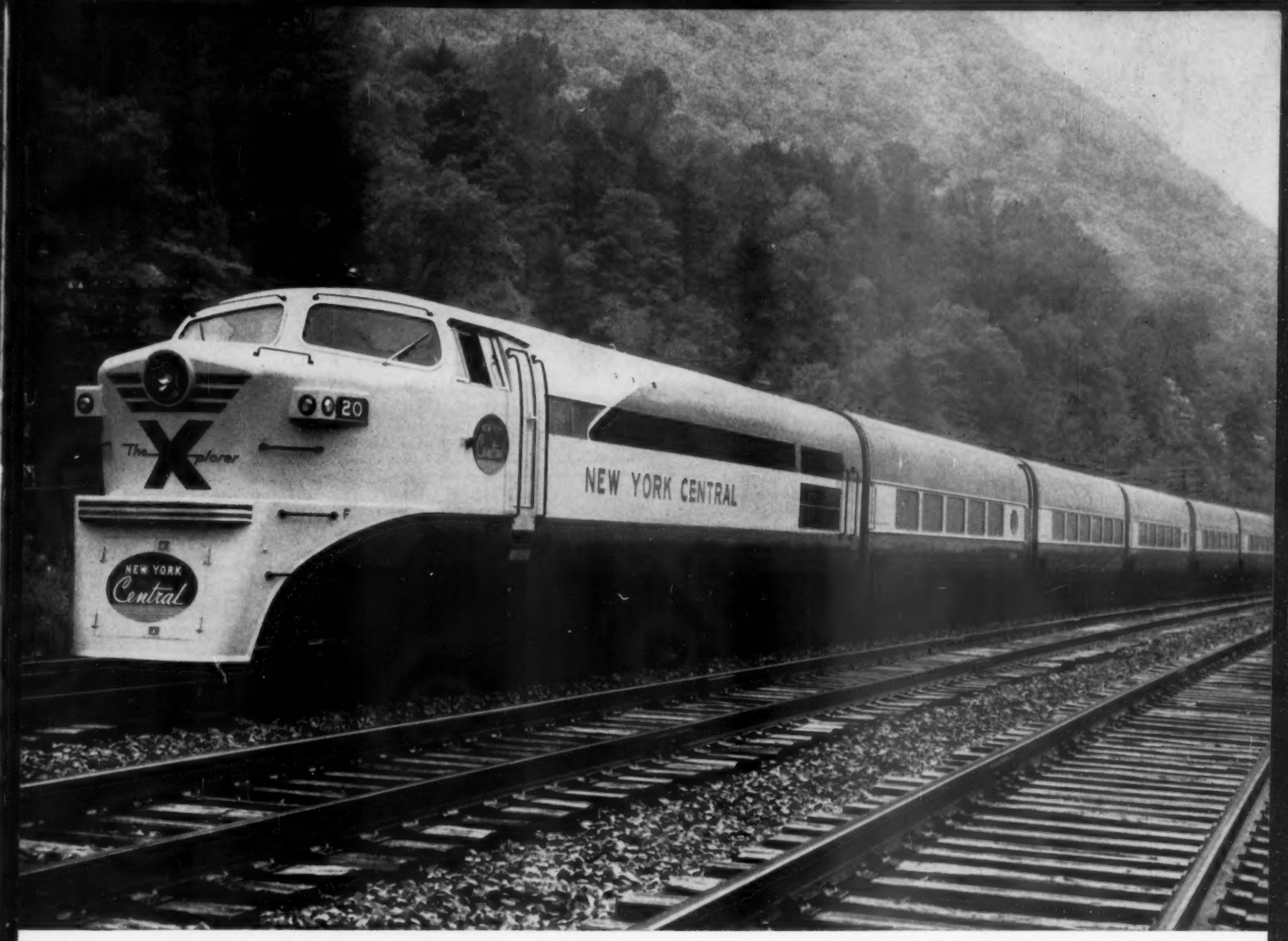


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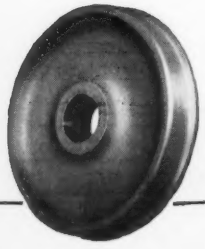

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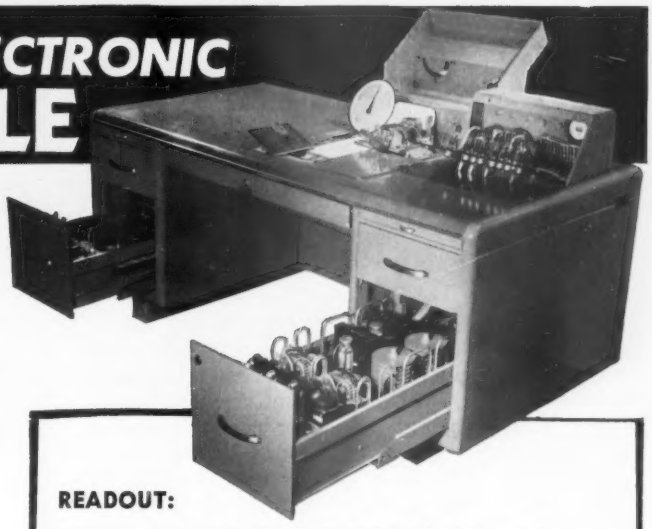

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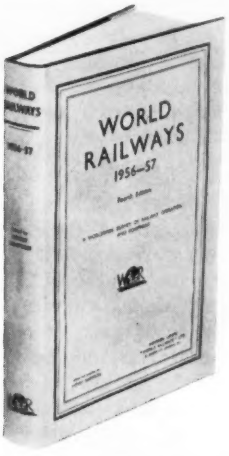


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# Another ICC "Umbrella" Decision

The ICC keeps on insisting that Congress should not disturb its dictatorial power over freight rates. Specifically, it doesn't want to be deprived of authority to force a more economical form of transportation to keep its rates so high that a less economical form can capture what the ICC considers to be its "fair share" of the business. The commissioners want to retain this power, taking it for granted that they will exercise it wisely. The commissioners are conscientious men. Nevertheless, nobility of motive carries with it no automatic guarantee of infallibility.

The fact is that anti-economic rate-making by the ICC goes on all the time. A recent instance is a decision handed down by Division 3 early in January, setting rates on gasoline and fuel oil from a pipeline terminal at Friendship, N.C., to various points in Virginia and West Virginia. The destinations represent hauls under 200 mi by highway—the rail distances being greater.

### *Favors High-Cost Carrier*

The railroads sought to fix their rates for about 20 destinations (all of them of more than 75 miles' haul)—at a figure 1.5 cents lower per 100 lb than existing truck charges. The cost evidence indicated that they could well afford to offer such rates; and that, generally speaking, the costs of rail transportation were lower than truck costs for distances over 75 miles. For example, the rail rate on gasoline to Abingdon, Va., had been 25 cents per 100 lb and the truck rate 25.9 cents, and the railroads wanted to reduce their rate to 24.5 cents. Cost evidence indicated that the fully distributed expense of rail movement (by the shortest route) was 22.9 cents and the cost of truck haul (including return on investment) was 26.1 cents per 100 lb.

On the comparative economy of railway and truck transportation, for this particular haul, it requires no more than ordinary common sense to conclude that the railroads would be economically justified in fixing their rate—not at just 1.5 cents below the truck rate, but at twice that differential, or 3 cents less than the truck rate.

But the ICC doesn't approach these issues in this simple arithmetical way. It took a look at the recent history of the movement of petroleum products in this territory. It found that, where railroad rates were equal to the truck rates, the trucks got virtually all the business (presumably because of more convenient or faster service). On the other hand, where the railroad rates were as much as 1.5 cents *under* the truck rates (which is what the railroads proposed to establish in the present case), the railroads got about 75 per cent of the business.

**THIS RELATES TO:**

- **1—Challenging competition**
- **2—Holding to high service standards**
- **3—Increasing internal strength**
- **4—Getting a higher level of earnings**
- **5—Improving tools and methods**
- **6—Seeking a friendlier environment**

So—apparently with no other purpose in mind than to assure the trucks more than 25 per cent of the traffic *even though they are clearly the high-cost agency*—the ICC decreed that the railroad rate should not be more than 1 cent under the truck rate.

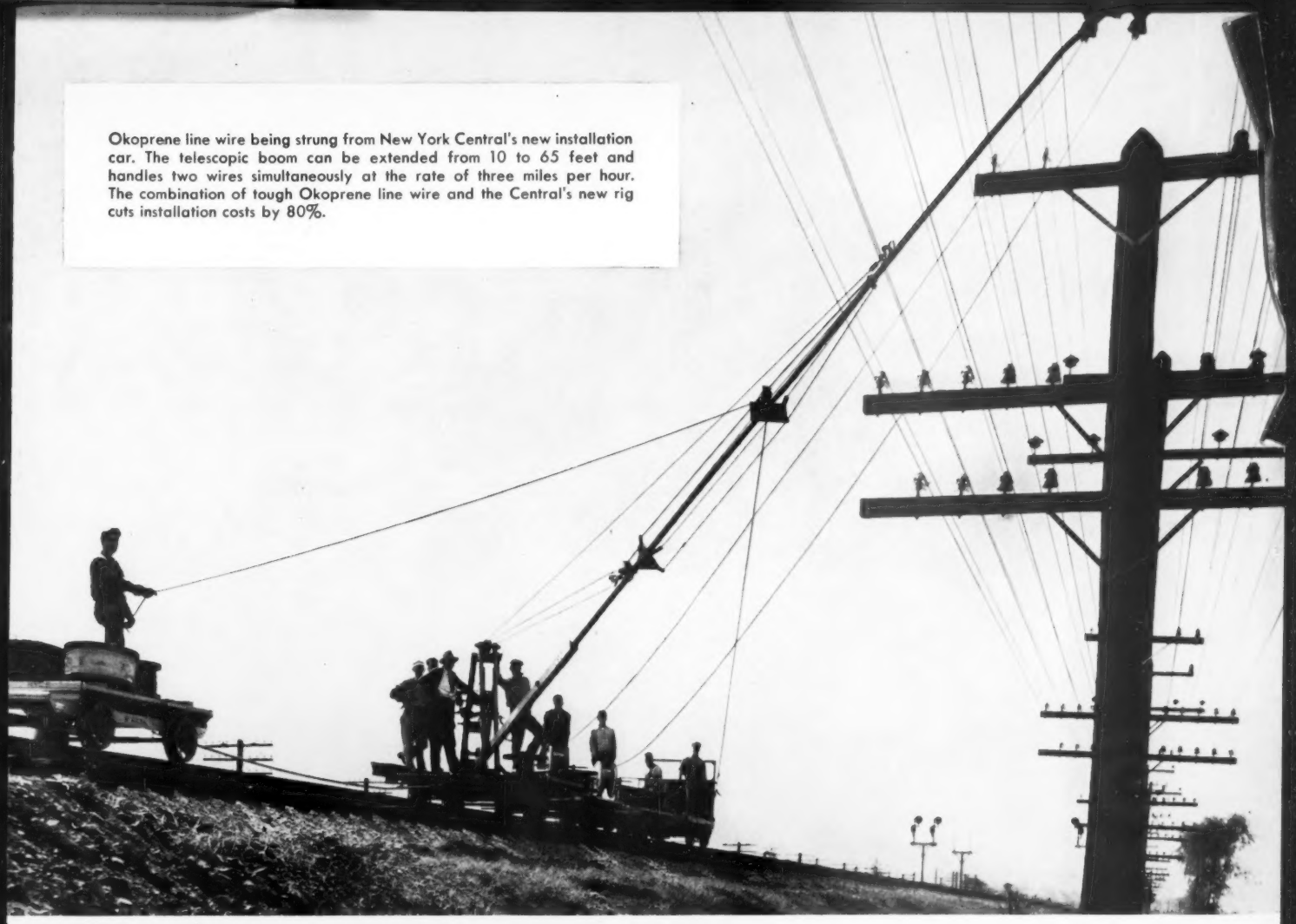
**Of course, if the shoe were on the other foot—and the railroad were the high-cost carrier, it would be impossible for the ICC to set truck rates arbitrarily high to enable the railroads to share the traffic. Because, if truck rates are set very much above costs of truck movement, the traffic shifts to private carriers, which are not regulated.**

This "umbrella rate" policy of the ICC in regulating competitive rates is a one-way street for the railroads—heads the railroads lose, tails their competitors win.

If other business were regulated as the ICC regulates the railroads, then the traditional American goal of competitive progress—a better product, or reduced costs—would vanish from the scene. And the American standard of living would be as low as it is in other countries—where prices are set by cartels rather than by competition.

### *More Publicity Might Help*

What can the railroads do to defend themselves against such plainly unfair treatment? Decisions like this are equally disadvantageous to railway patrons and to railway employees. If these cases were adequately publicized by the railroads among the affected public and among railroad employees, conditions would probably soon take a turn for the better. Also, it might not hurt for the railroads to introduce the testimony of economists of recognized stature into these cases. The commissioners are reasonable men, and could scarcely fail to be impressed if they were shown by authoritative and irrefutable testimony wherein the course they are now pursuing is contrary to the public interest.



Okoprene line wire being strung from New York Central's new installation car. The telescopic boom can be extended from 10 to 65 feet and handles two wires simultaneously at the rate of three miles per hour. The combination of tough Okoprene line wire and the Central's new rig cuts installation costs by 80%.

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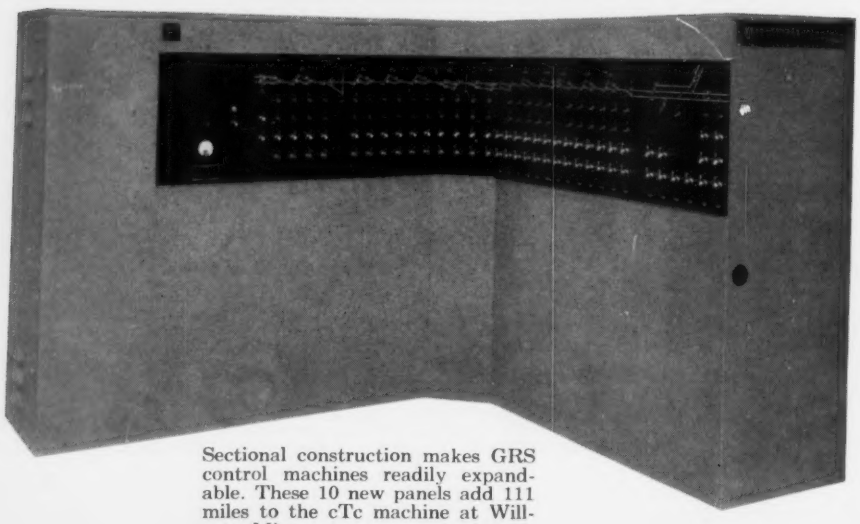
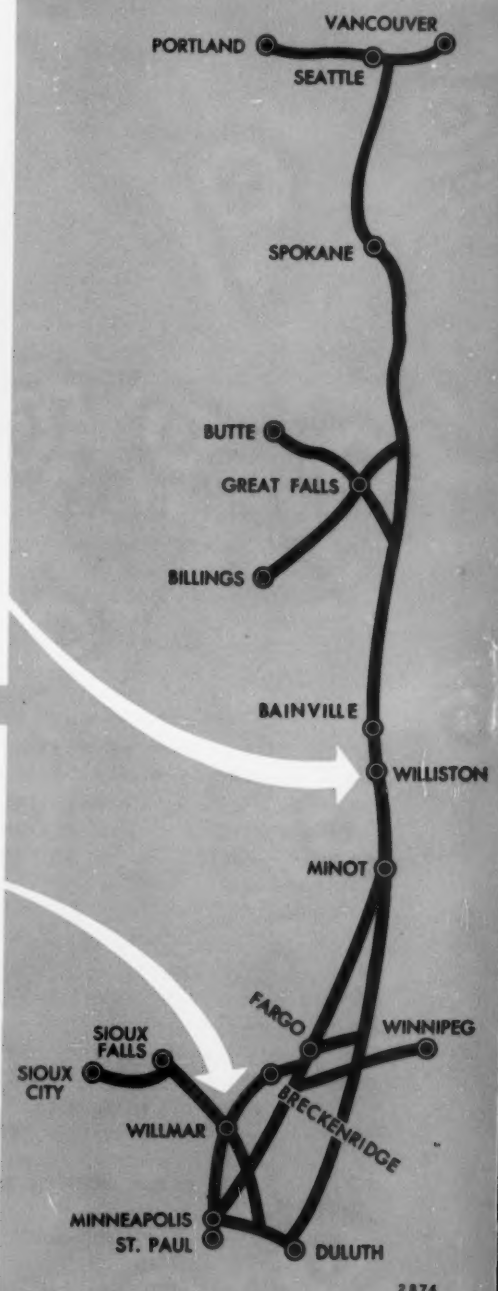
This Syncroscan control machine at Williston, N.D. scans traffic conditions at the rate of 100 indications a second.



Sectional construction makes GRS control machines readily expandable. These 10 new panels add 111 miles to the cTc machine at Willmar, Minn.

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